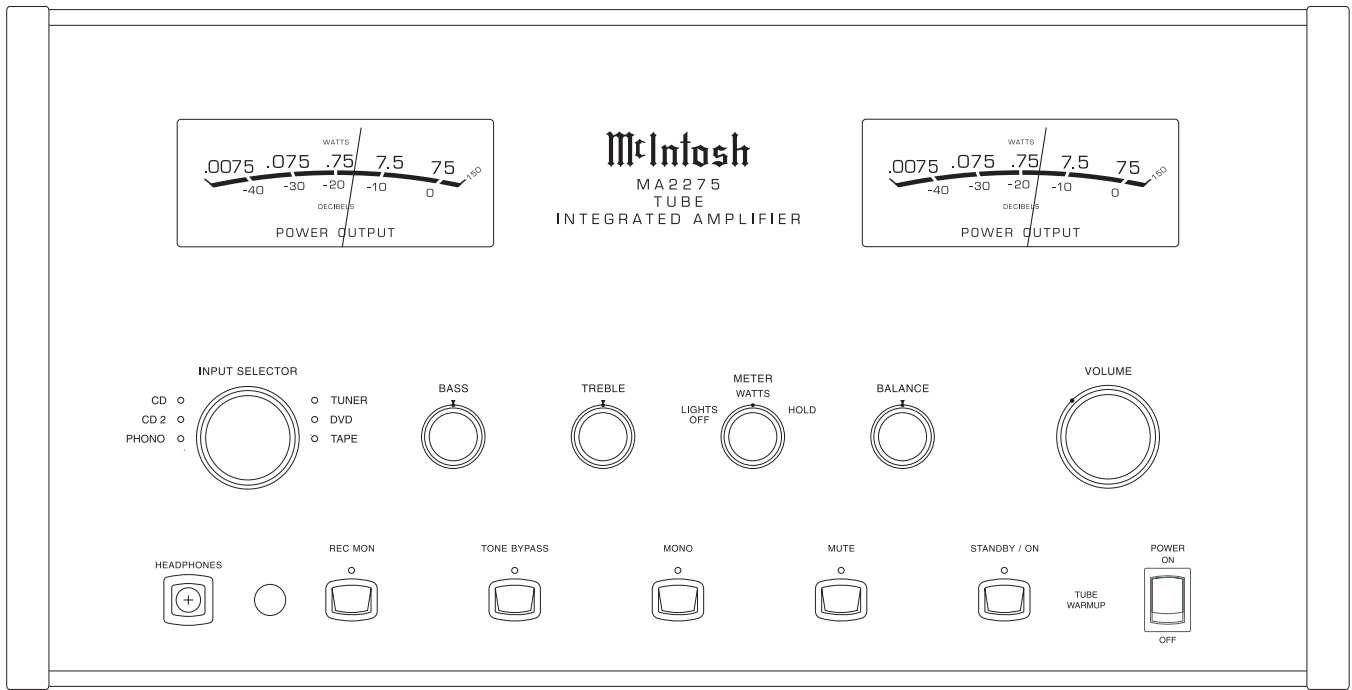




MA2275

TUBE INTEGRATED AMPLIFIER



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SERVICE MANUAL

PERFORMANCE SPECIFICATIONS

Power Output

Minimum sine wave continuous average power output per channel, both channels operating is:
75 watts into a 2 ohm load
75 watts into a 4 ohm load
75 watts into an 8 ohm load

Rated Power Band

20Hz to 20,000Hz

Total Harmonic Distortion

Maximum Total Harmonic Distortion at any power level from 250 milliwatts to rated power output is:
0.5% for a 2, 4 or 8 ohm load

Frequency Response

+0, -0.5dB from 20Hz to 20,000Hz
+0, -3dB from 10Hz to 50,000Hz

Sensitivity

Phono: 4.4mV for 2.5V preamp output
High Level: 450mV for 2.5V preamp output
Power Amplifier Input: 2.5V for rated output

A-Weighted Signal To Noise Ratio

Phono Input: 80dB below 10mV input
High Level: 97dB below rated output
Power Amplifier: 110dB below rated output

Intermodulation Distortion

Maximum Intermodulation Distortion if instantaneous peak output does not exceed twice the rated output, for any combination of frequencies from 20Hz to 20,000Hz is:
0.5% for a 2, 4 or 8 ohm load

Input Impedance

Phono: 47k ohms, 65pF
High Level: 22k ohms

Maximum Input Signal

Phono: 90mV
High Level: 8V

Preamplifier Maximum Voltage Output

Phono: 8V
High Level: 8V
Main Out: 8V at preamp output

Voltage Gain

High Level to Tape output: 0dB
High Level to Preamp output: 15dB

Wide Band Damping Factor

Greater than 18

Power Requirements

100 Volts, 50/60Hz at 3.6 amps
110 Volts, 50/60Hz at 3.6 amps
120 Volts, 50/60Hz at 3.6 amps
220 Volts, 50/60Hz at 1.8 amps
230 Volts, 50/60Hz at 1.8 amps
240 Volts, 50/60Hz at 1.8 amps

Note: Refer to the rear panel of the MA2275 for the correct voltage.

Preamplifier Tube Compliment

2 - 12AX7A Phono Circuitry
2 - 12AX7A High Level Circuitry

Power Amplifier Tube Compliment

2 - 12AT7
4 - KT88/6550


Overall Dimensions

Width is 17-3/4 inches (45.09cm), Height is 10-1/8 inches (25.72cm) including feet, Depth is 18-3/4 inches (47.63cm) including the Front Panel and Knobs

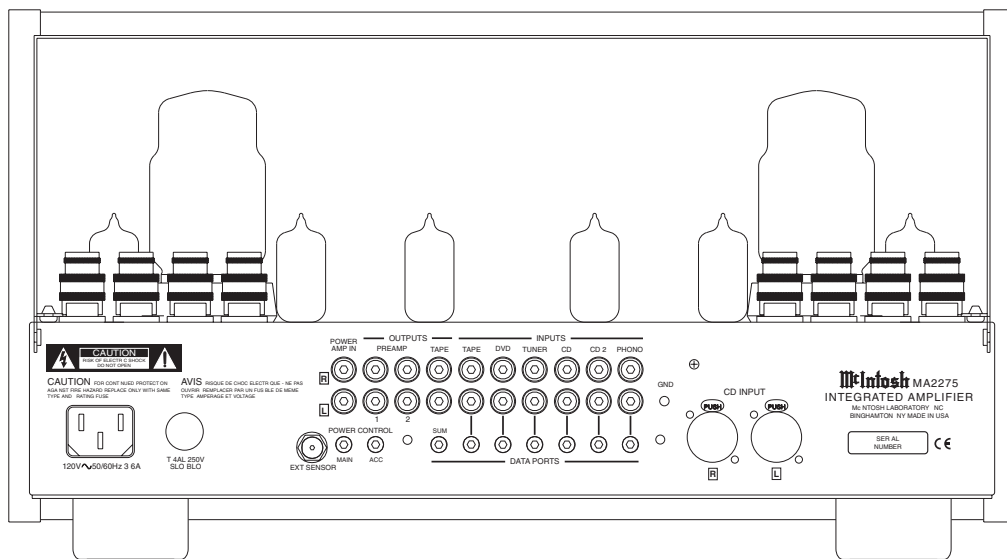
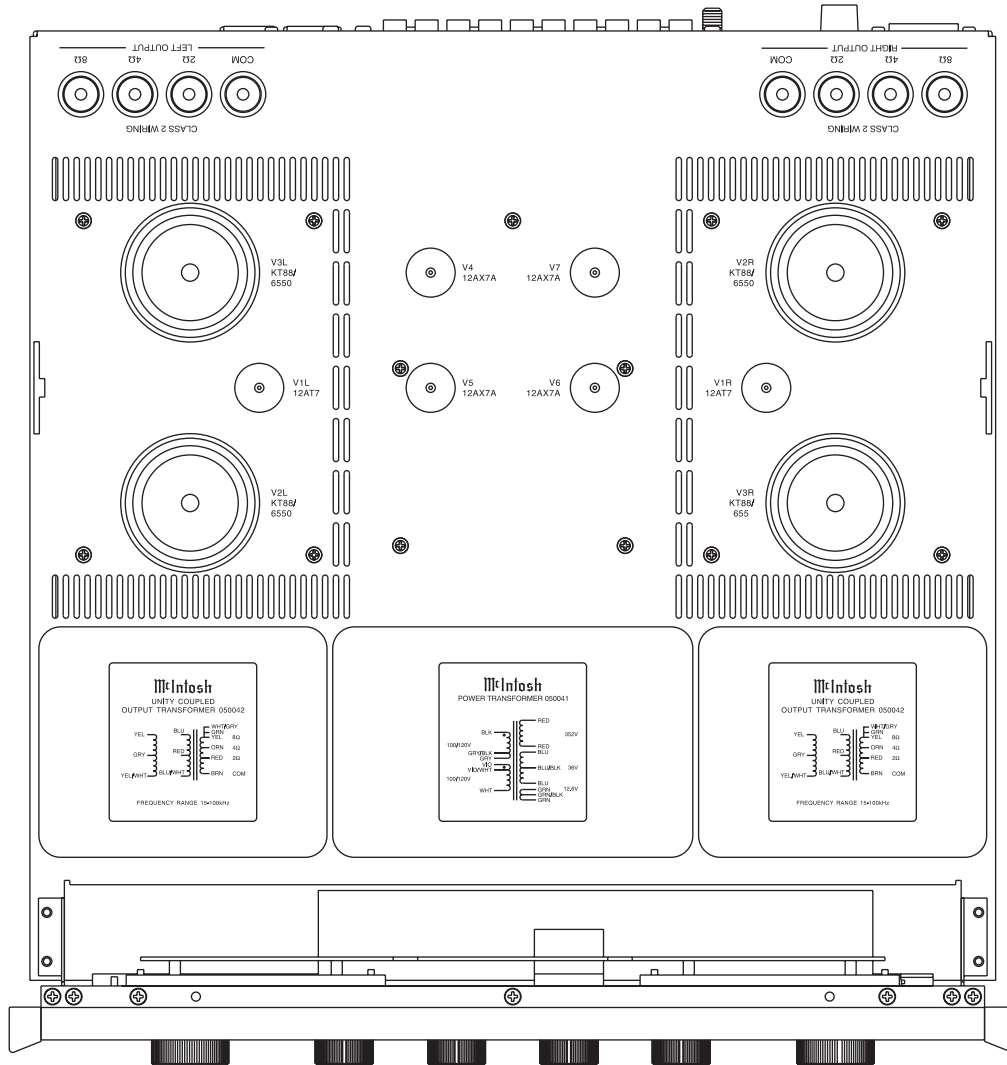
Weight

77 pounds (35 kg) net, 110 pounds (50 kg) in shipping carton

NOTES

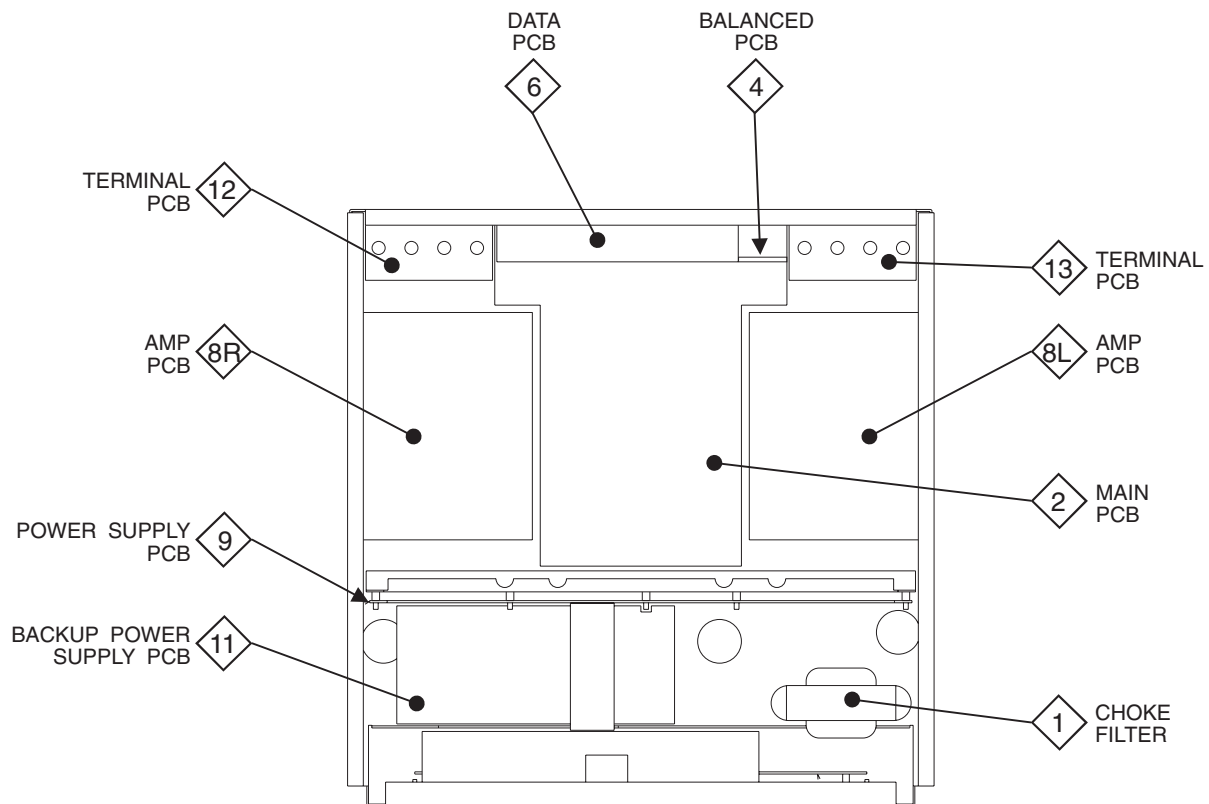
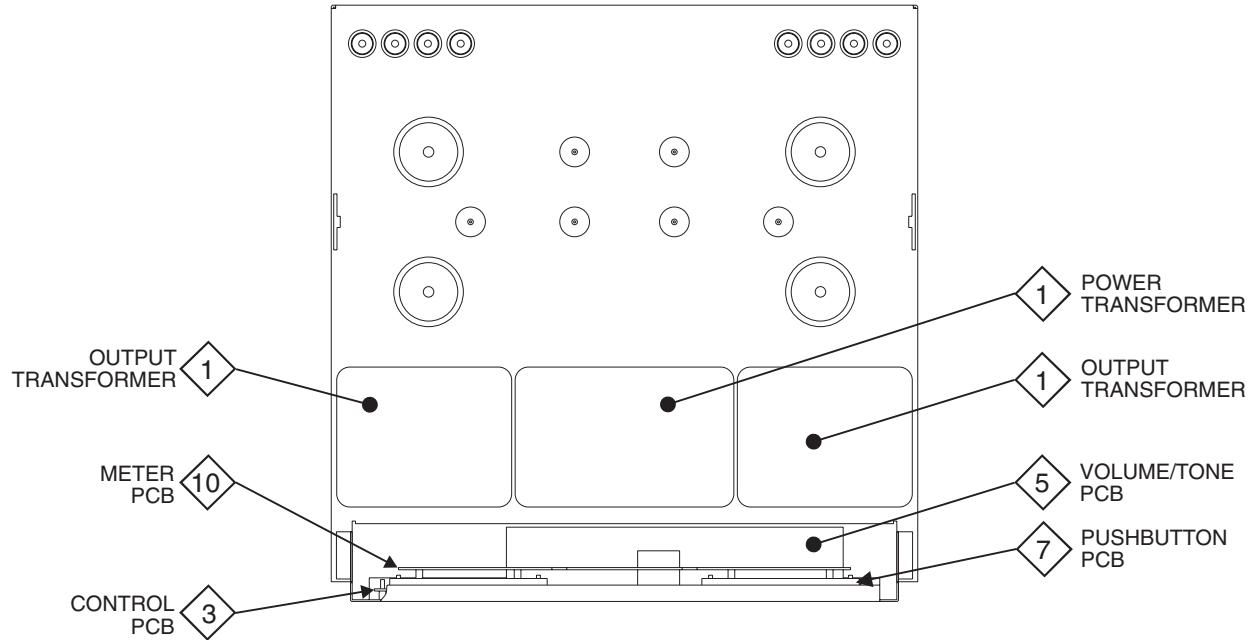
1. The heavy lines on the schematic denote the primary signal path.
2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
 - a. AC input at 120 volts, 50/60Hz.
 - b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.
3. Unless otherwise specified:
 - a. Resistor values are in ohms.
 - b. Capacitor values are microfarads (uF).
 - c. Inductor values are in microhenries (uH).
4. On PC board drawings, Square pad indicates:
 - a. Polarized Capacitors - Positive
 - b. Diodes - Cathode
 - c. Others - Pin 1
5. **WARNING**
Parts marked with the symbol  have critical characteristics. Use only replacement parts recommended by the manufacturer.

TOP AND REAR VIEWS



SECTION LOCATIONS

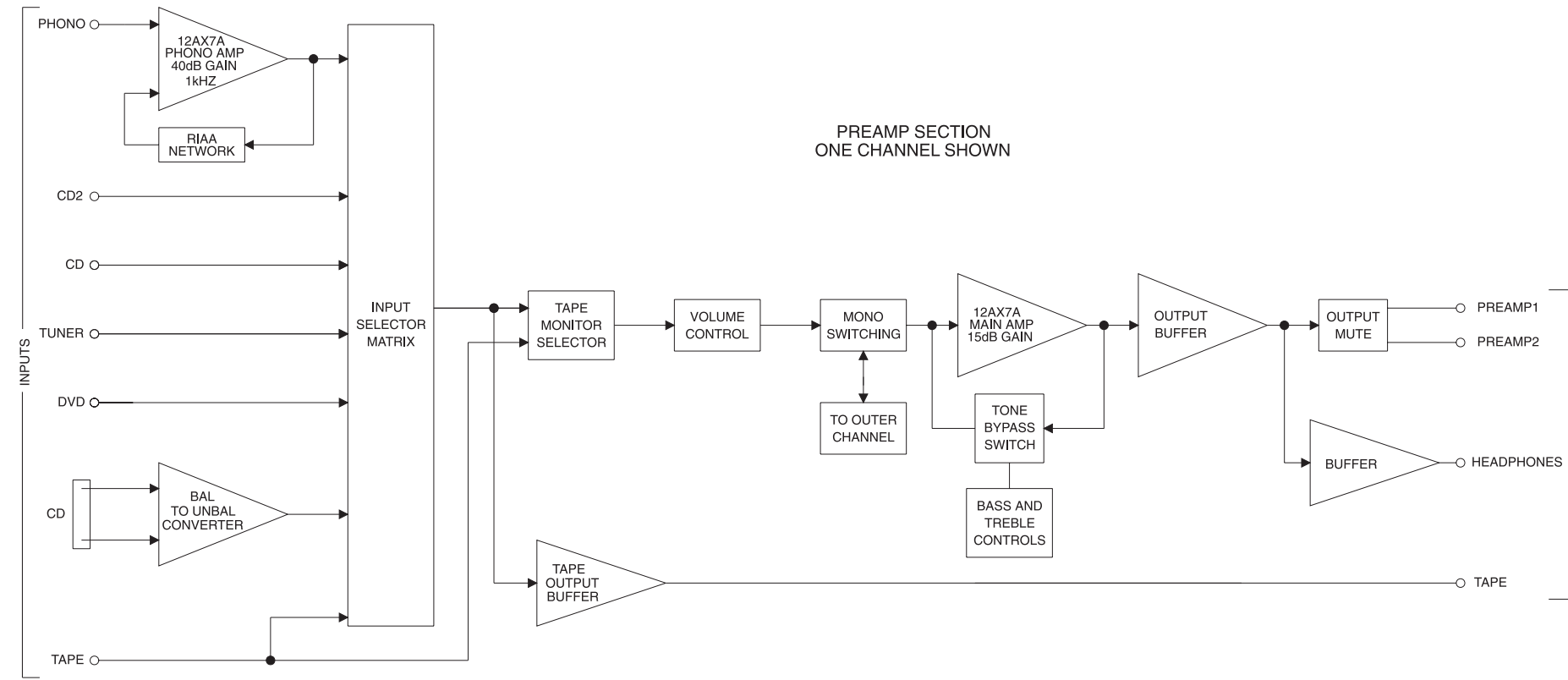
TOP VIEW WITH COVERS REMOVED



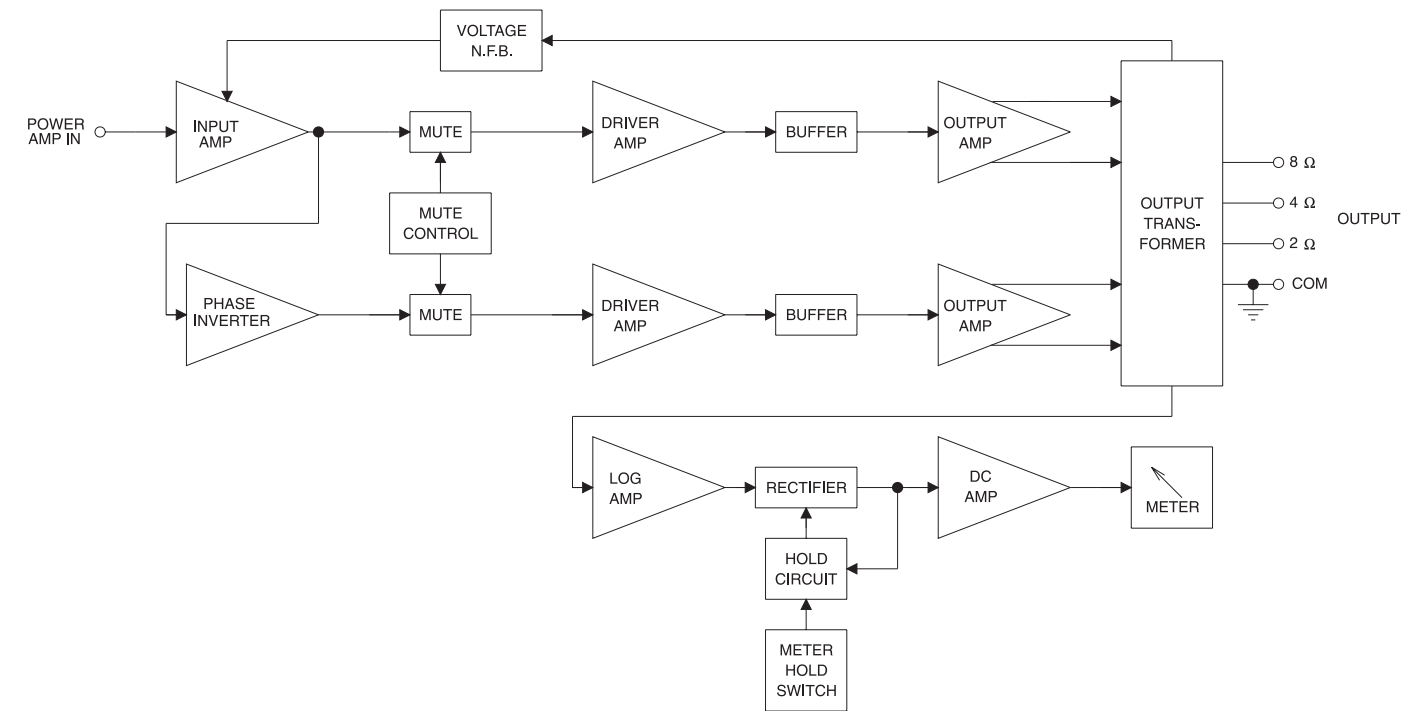
BOTTOM VIEW WITH COVER REMOVED

BLOCK DIAGRAM

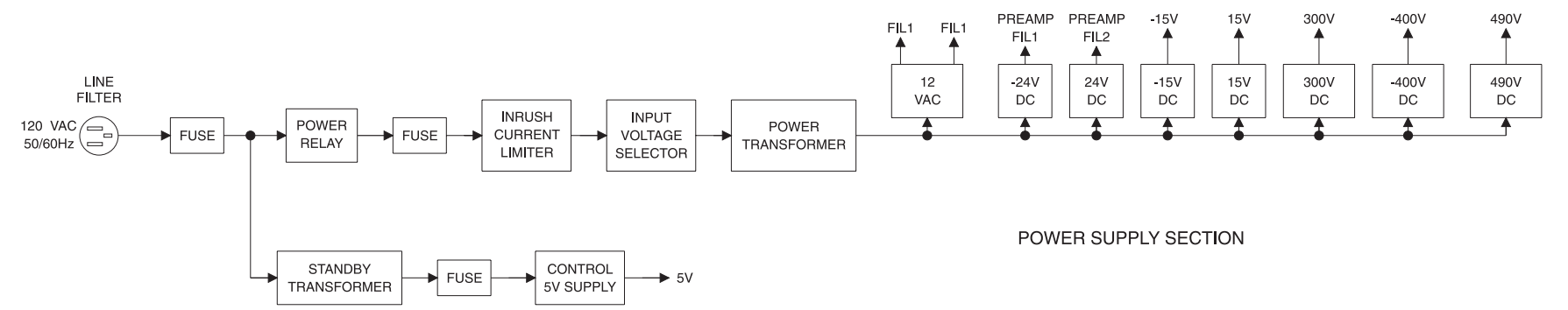
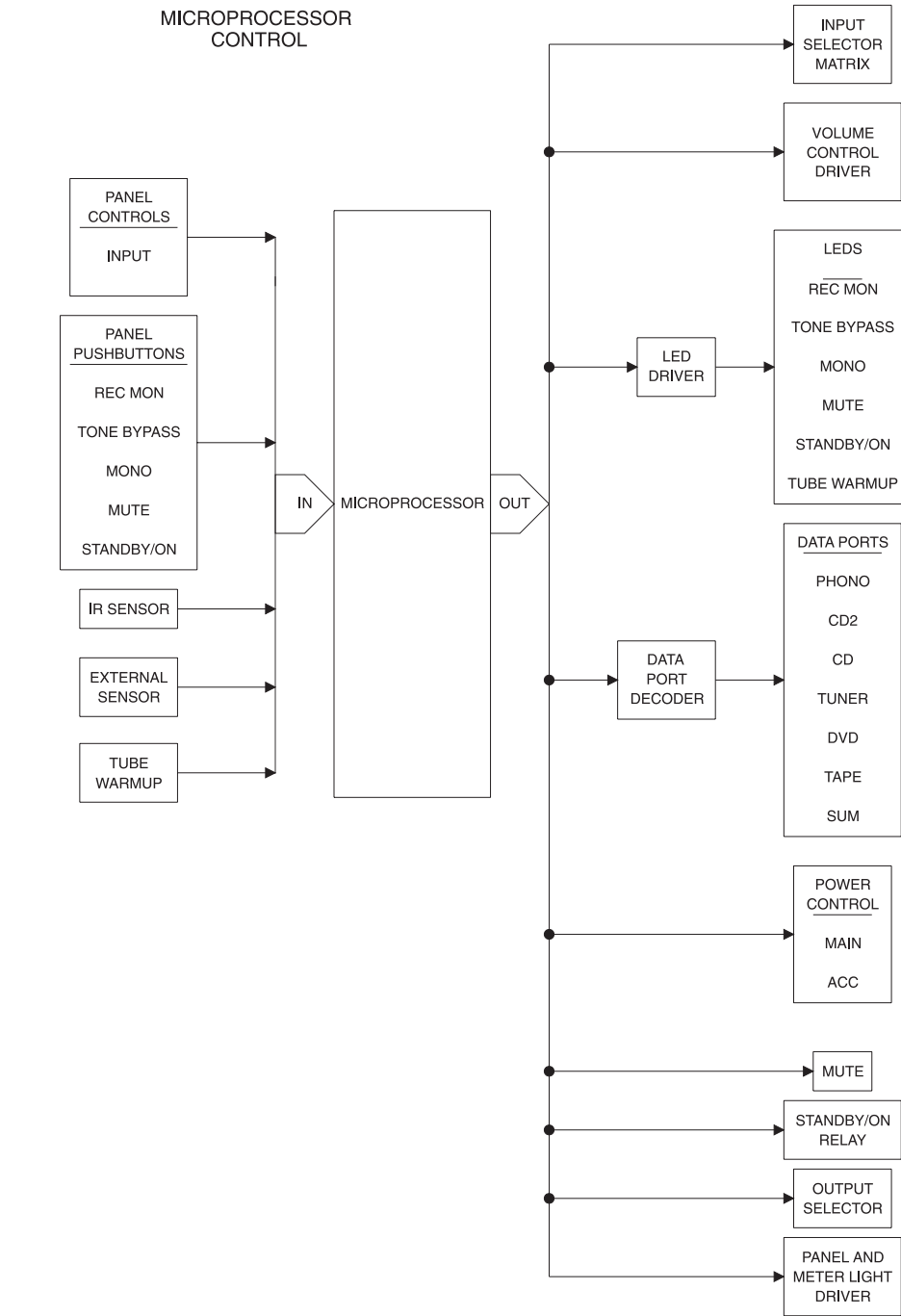
MA2275



AMPLIFIER SECTION ONE CHANNEL SHOWN



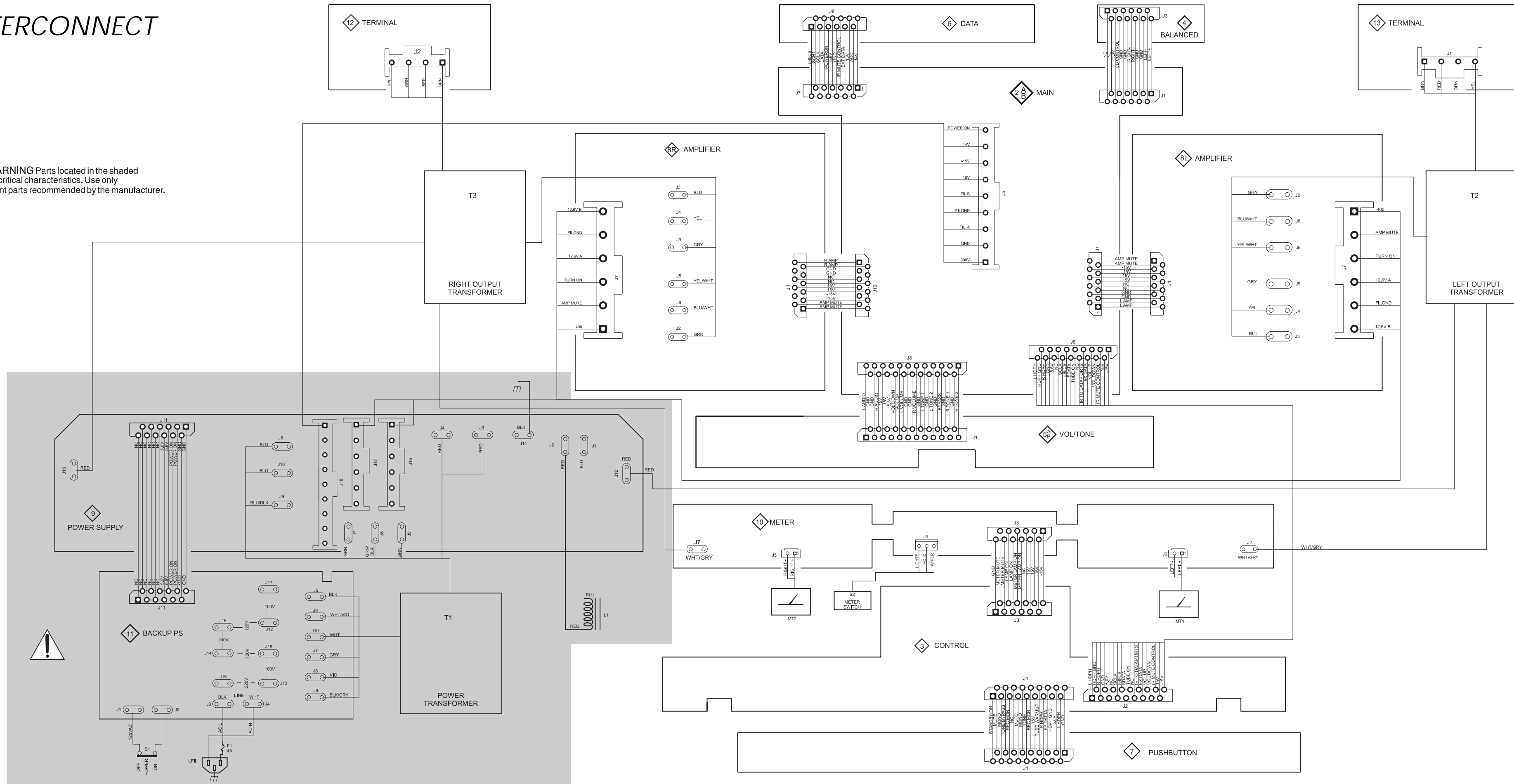
MICROPROCESSOR CONTROL

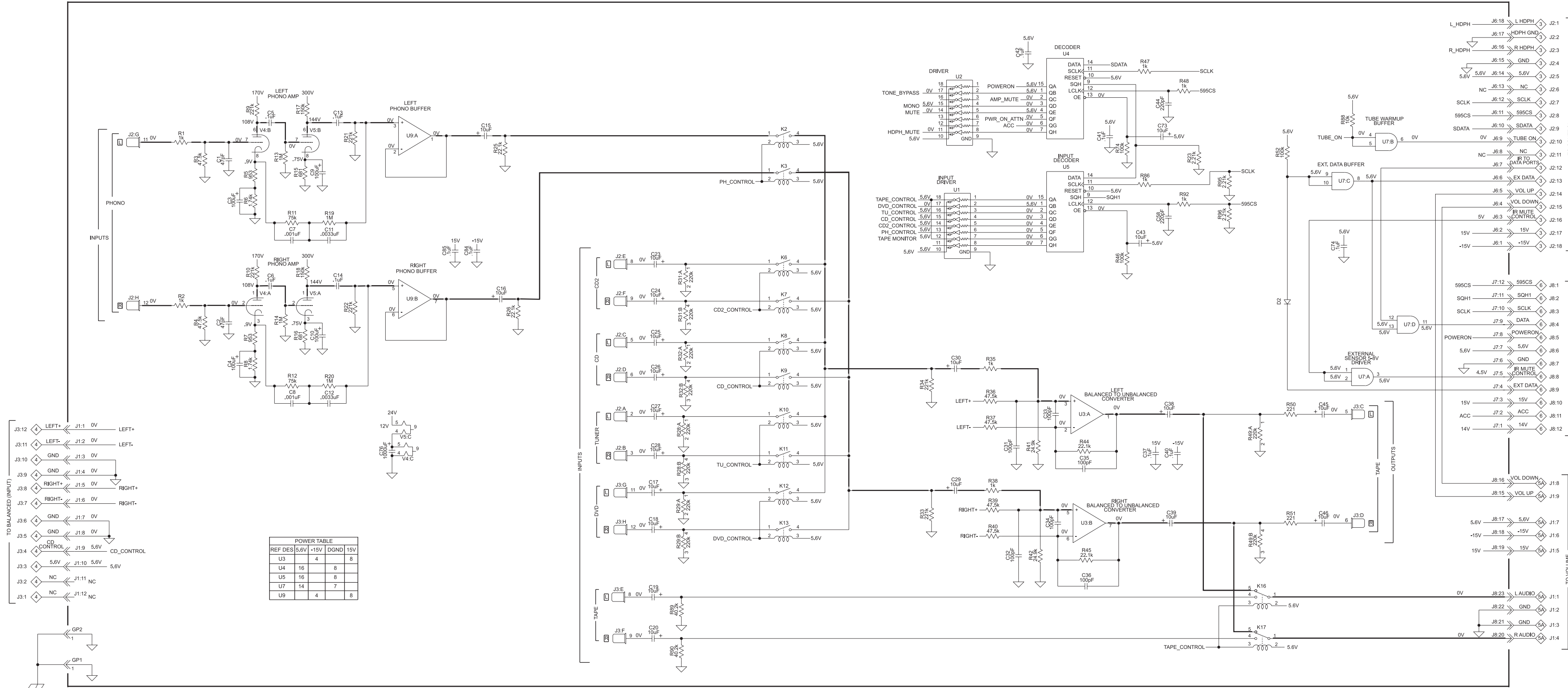


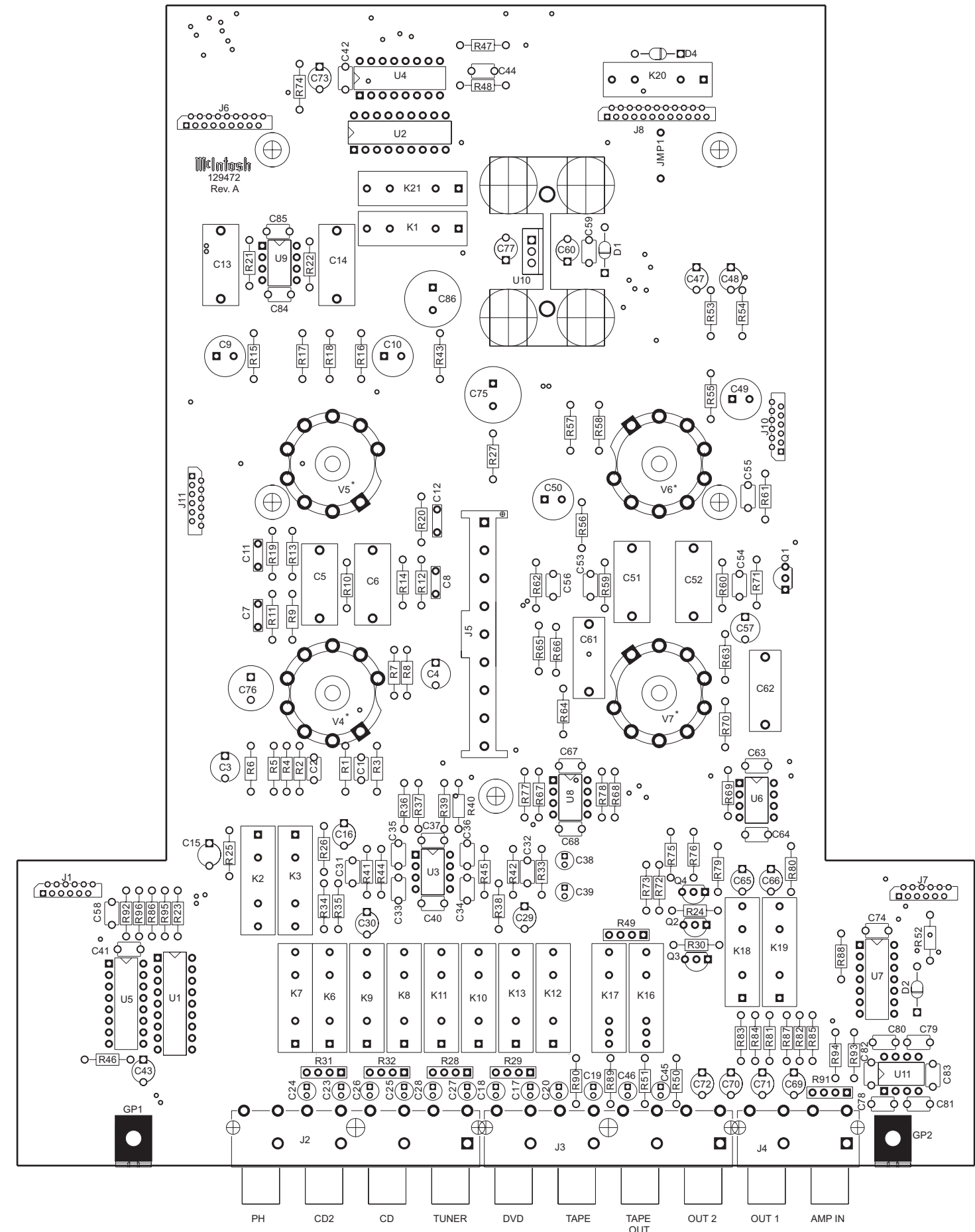
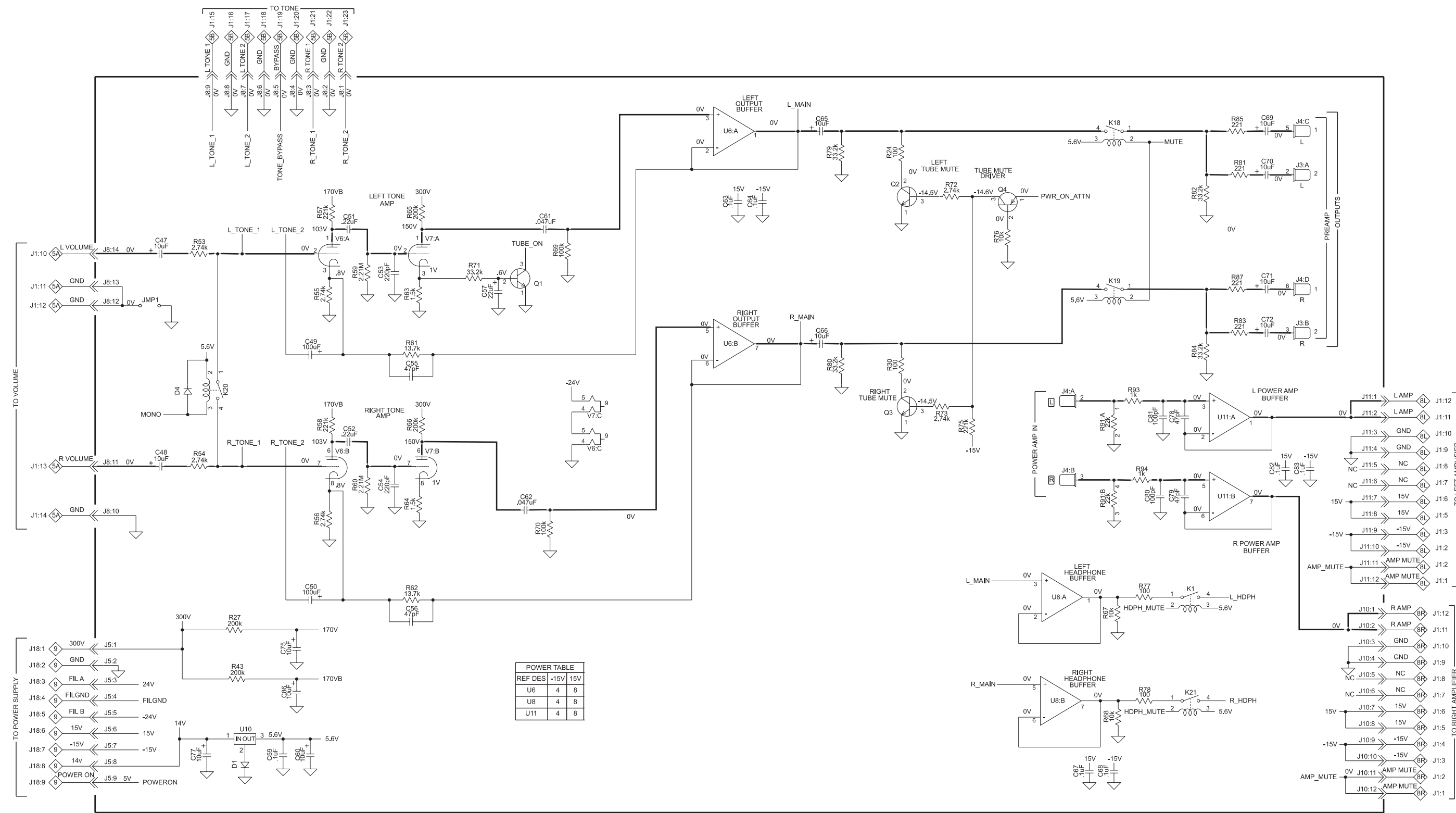
POWER SUPPLY SECTION

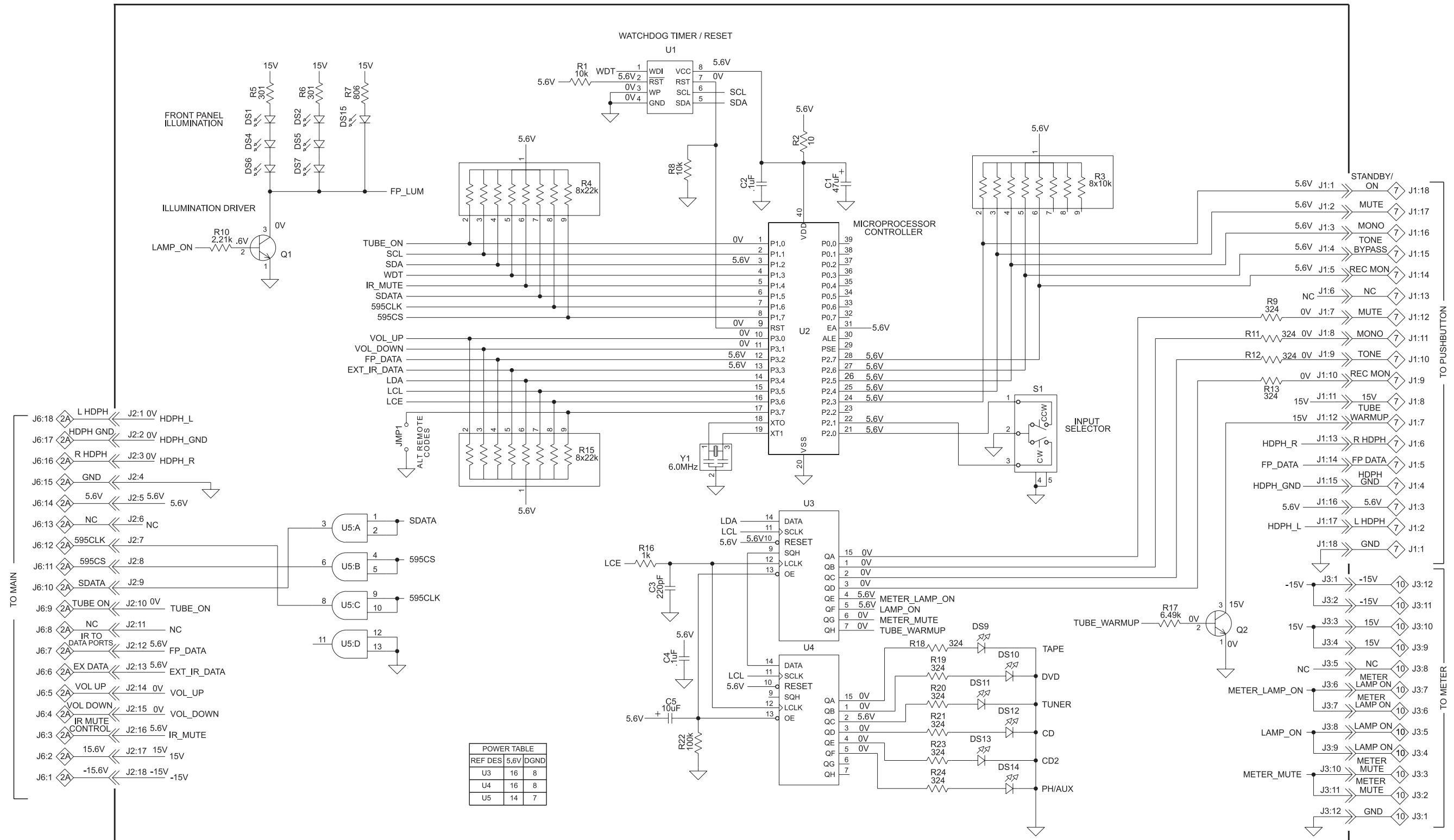
1 INTERCONNECT

WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.

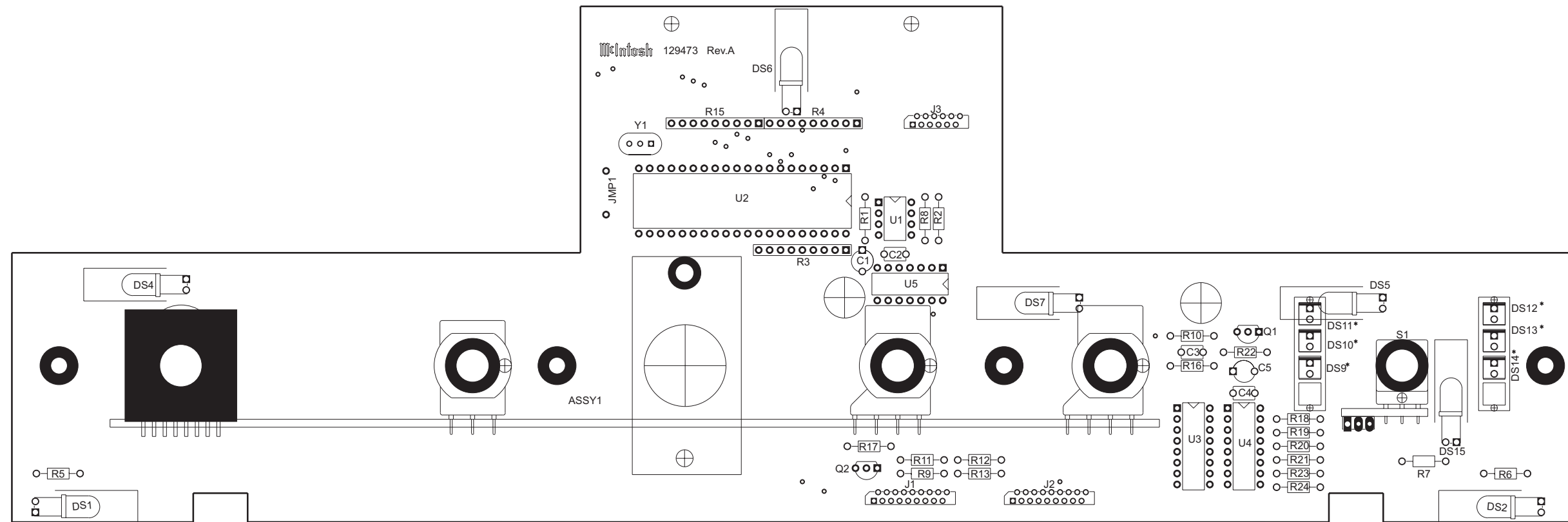




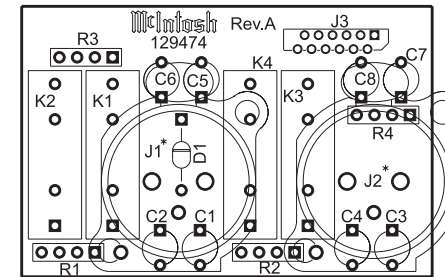
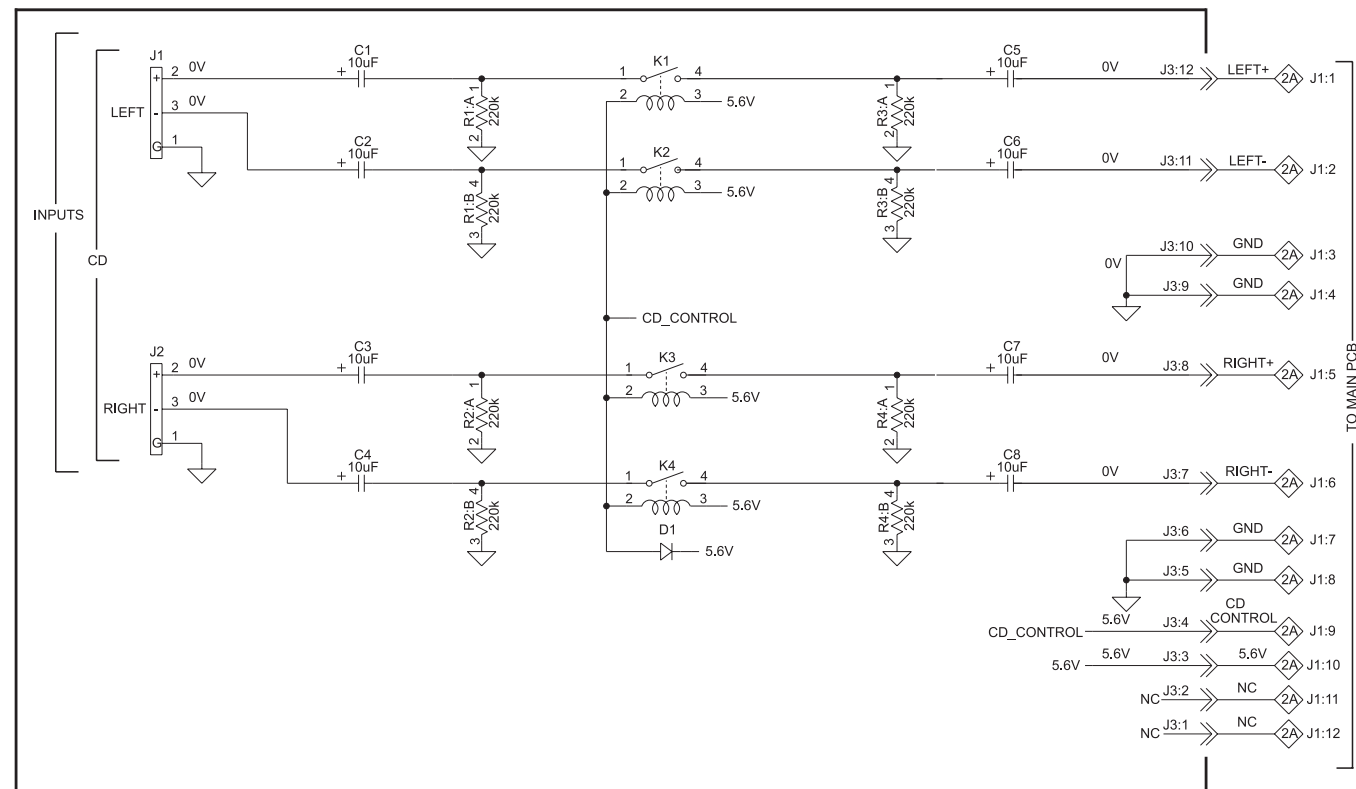




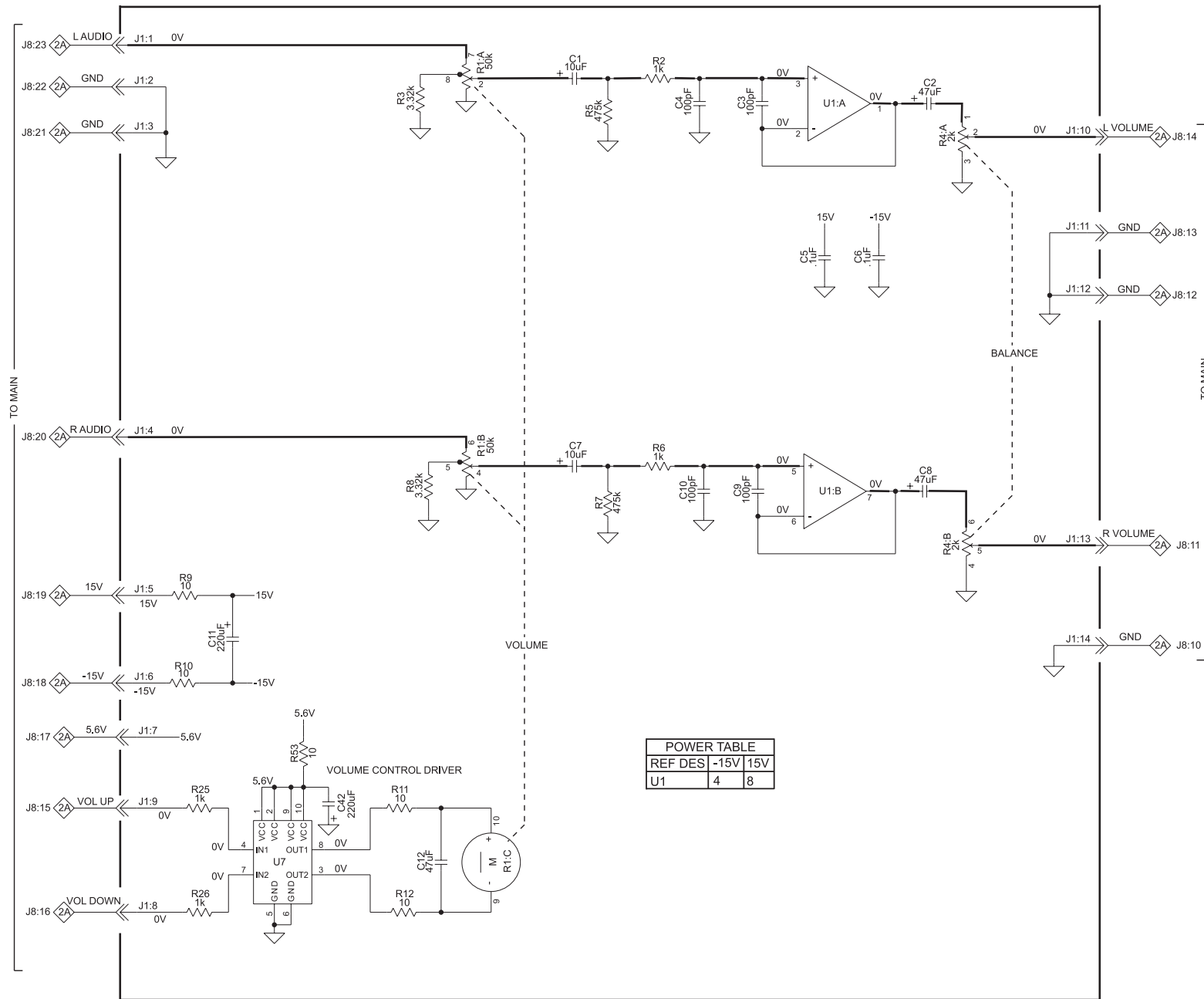
3 CONTROL 049966



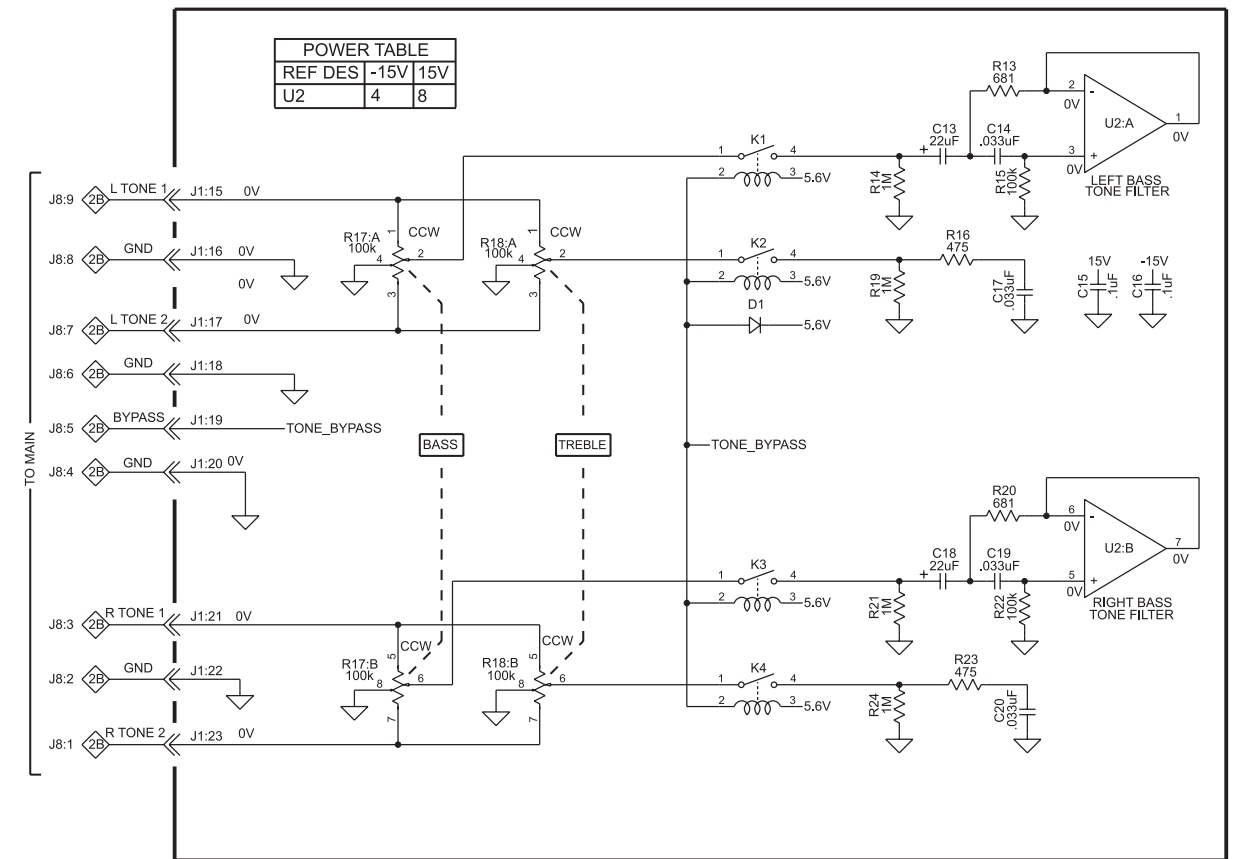
4 *BALANCED* 049967



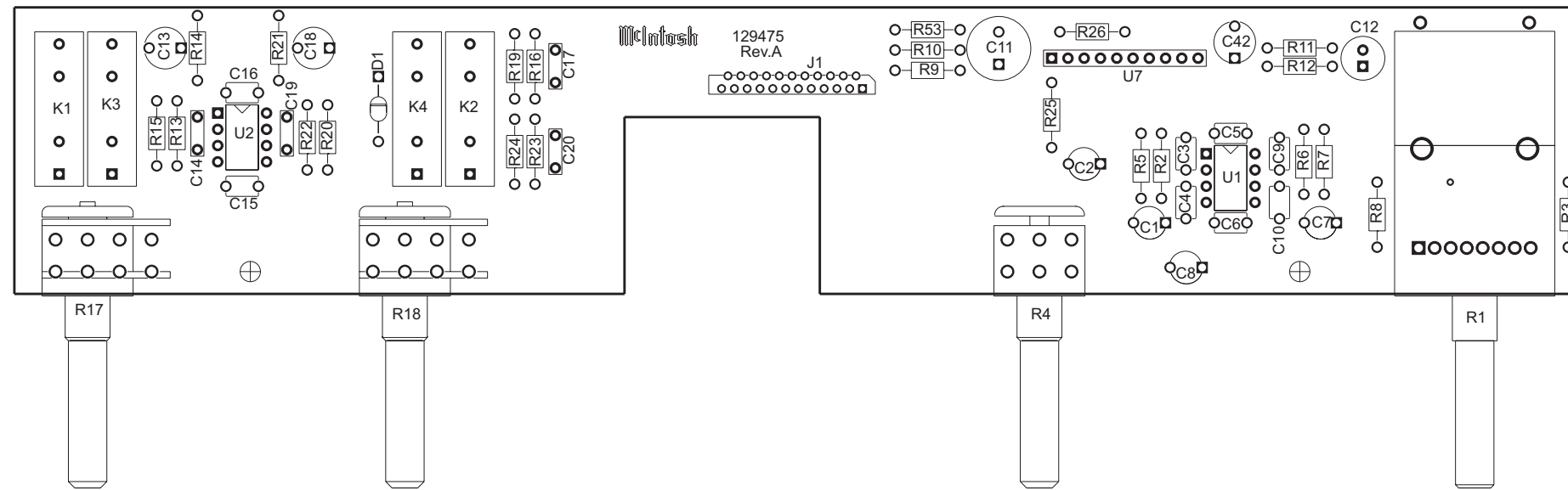
5A VOLUME/TONE 049968



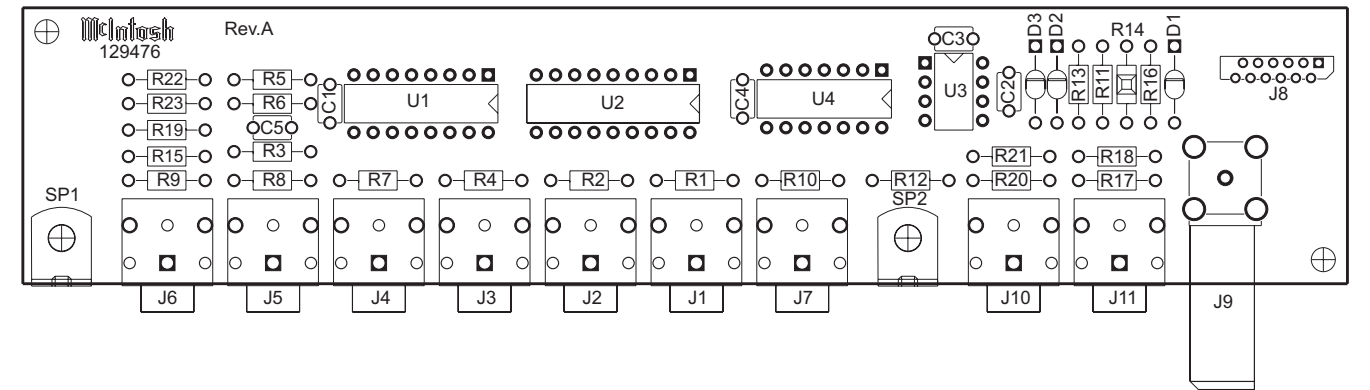
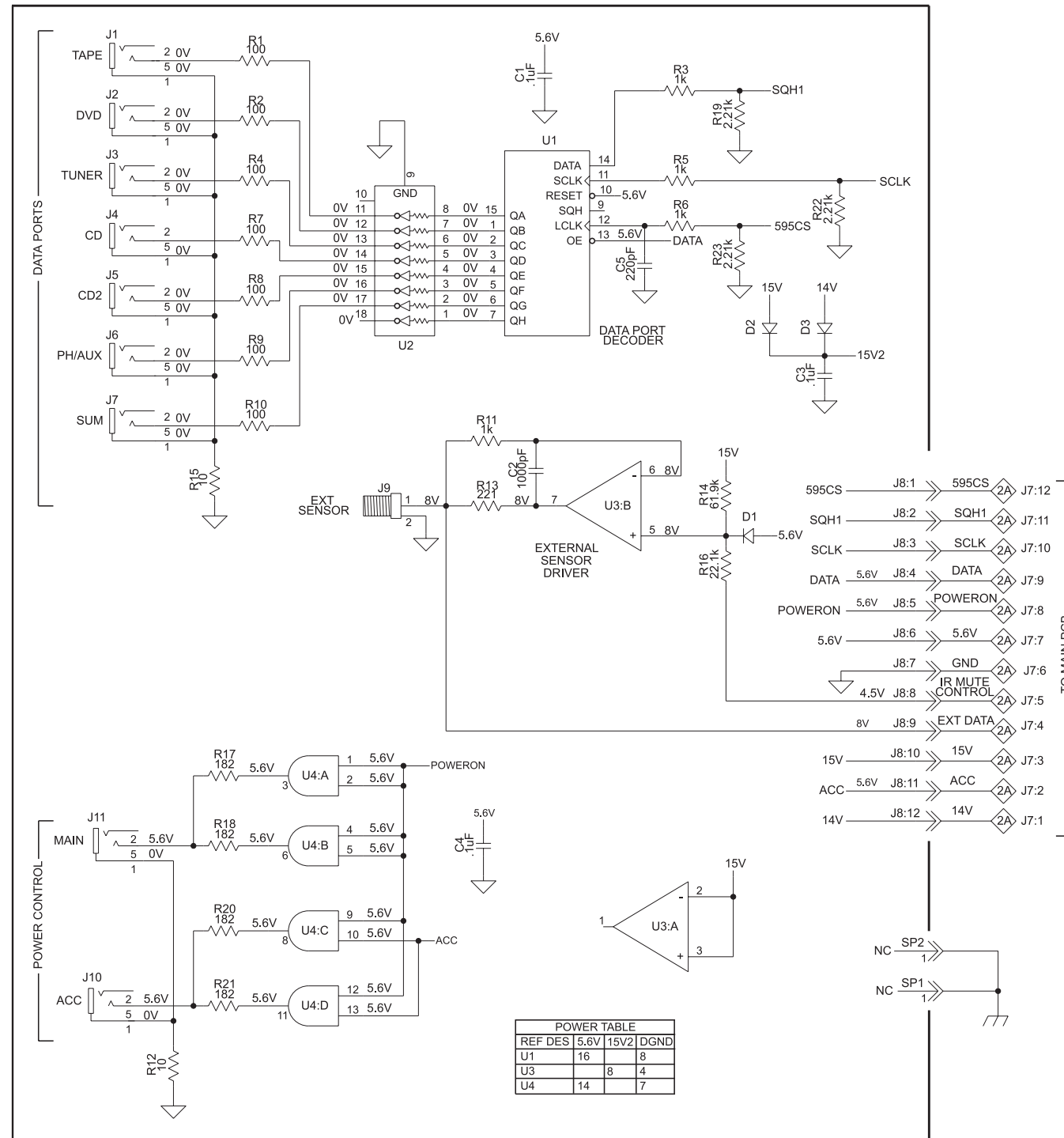
5B VOLUME/TONE 049968



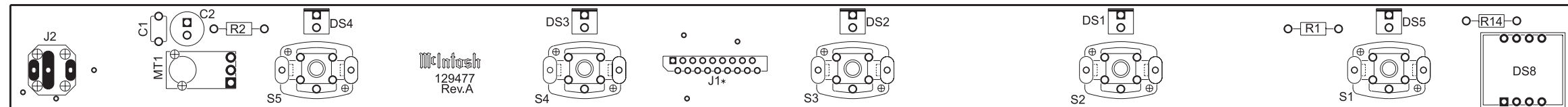
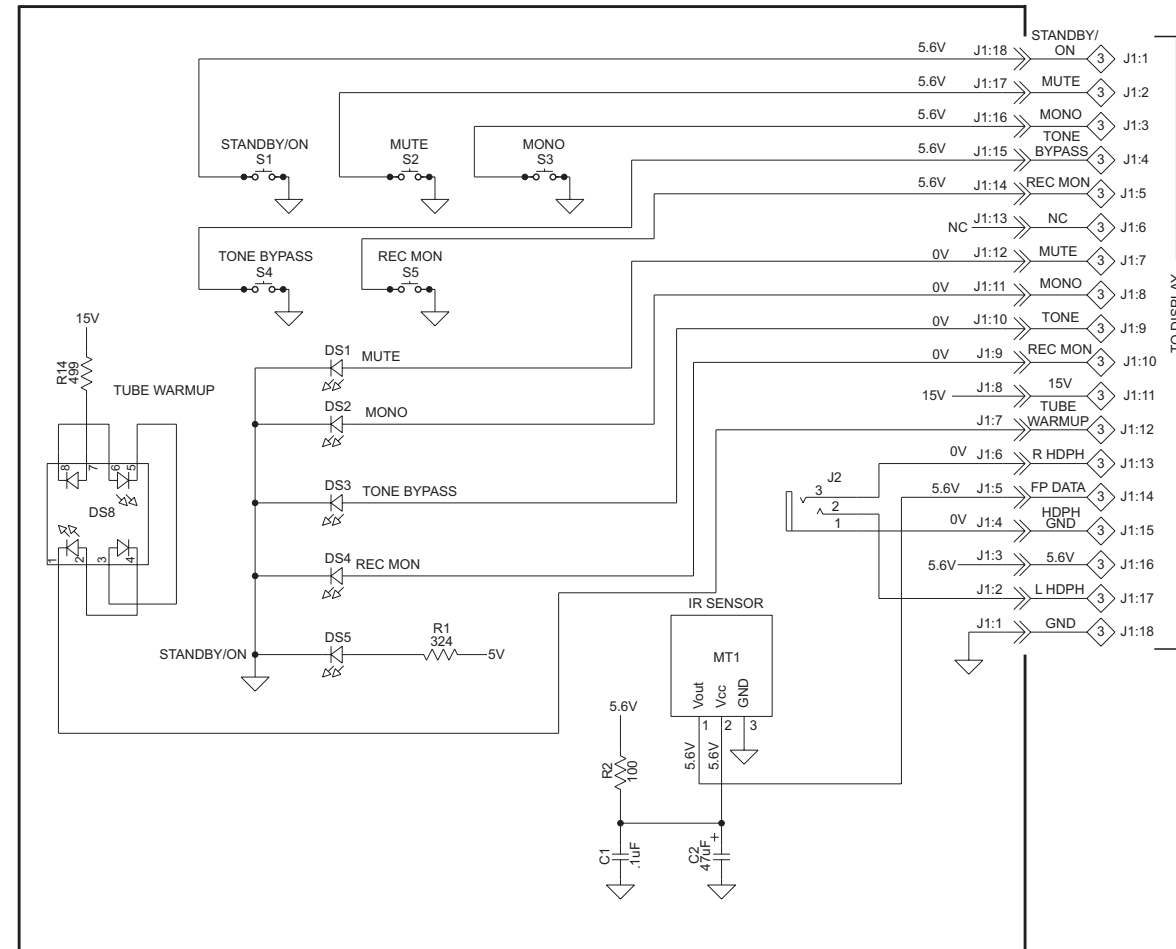
5 VOLUME/TONE 049968

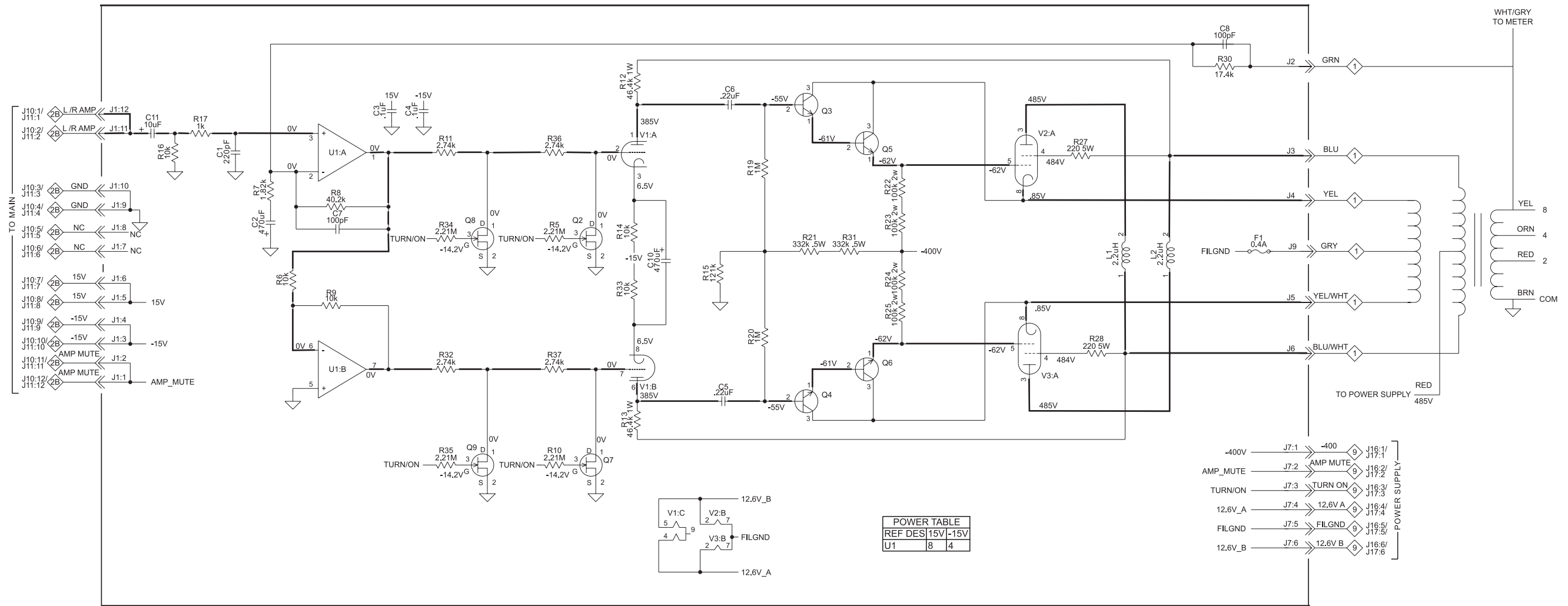


6 DATA 049969

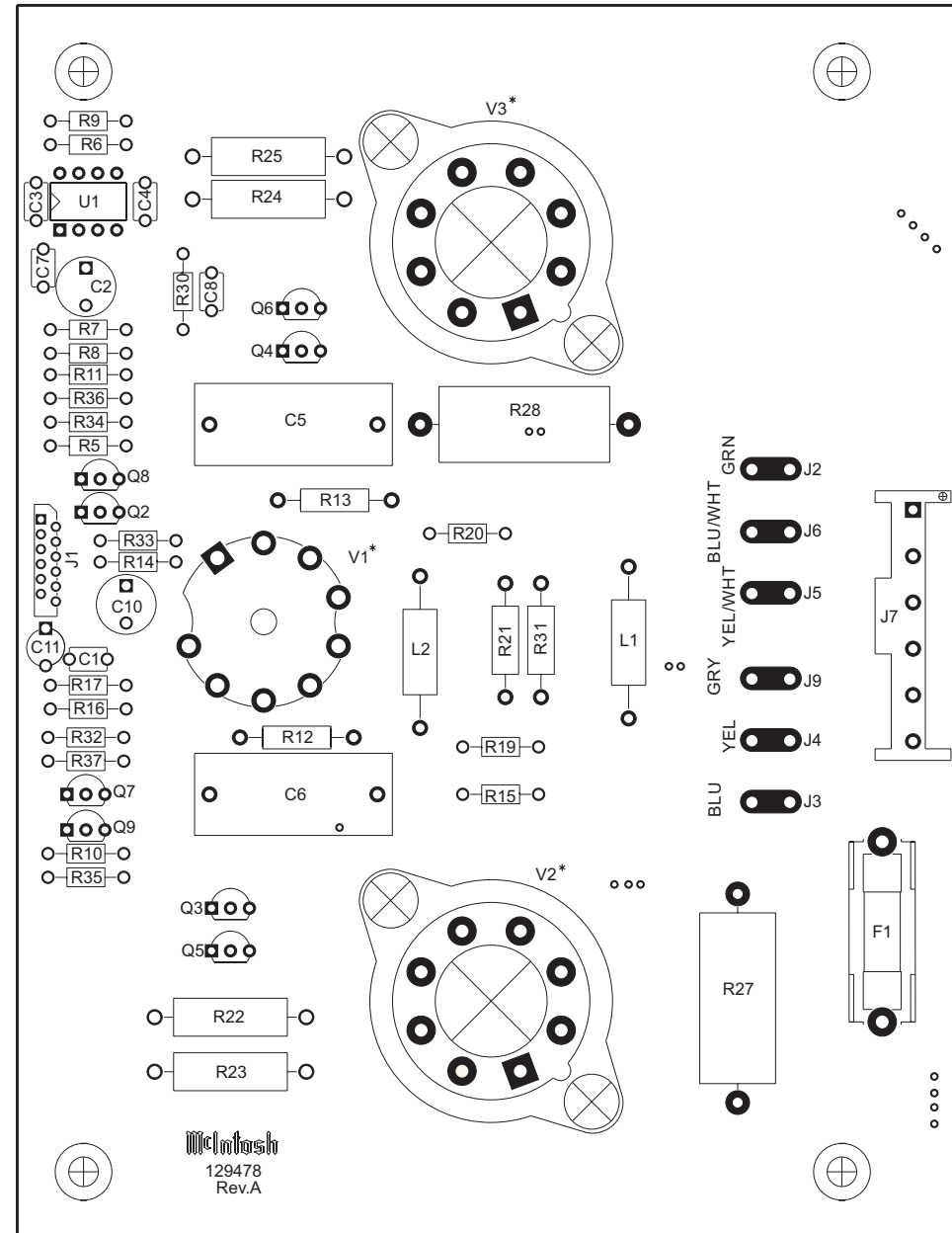


7 *PUSHBUTTON* 049970

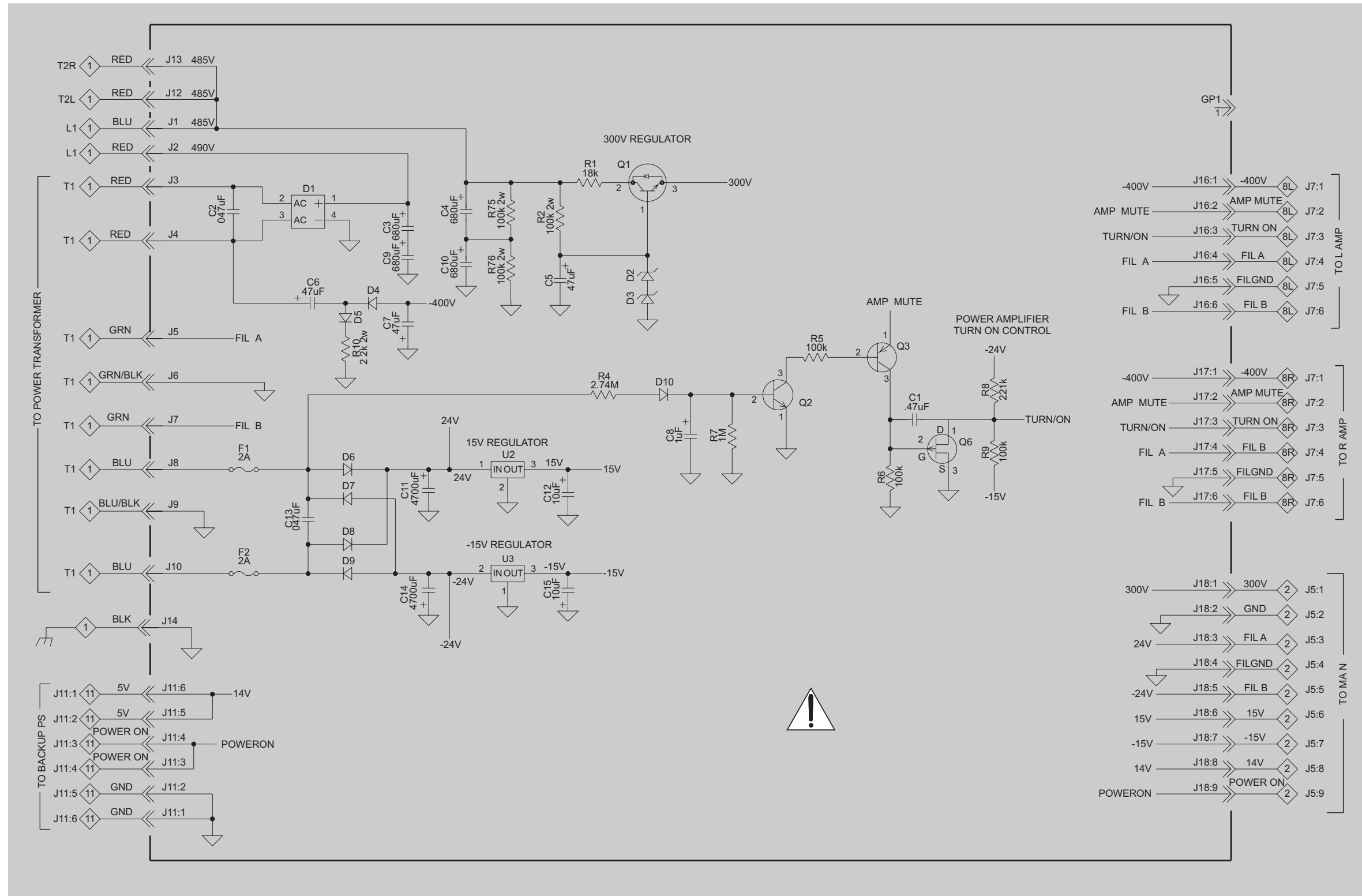




8 AMPLIFIER 049971




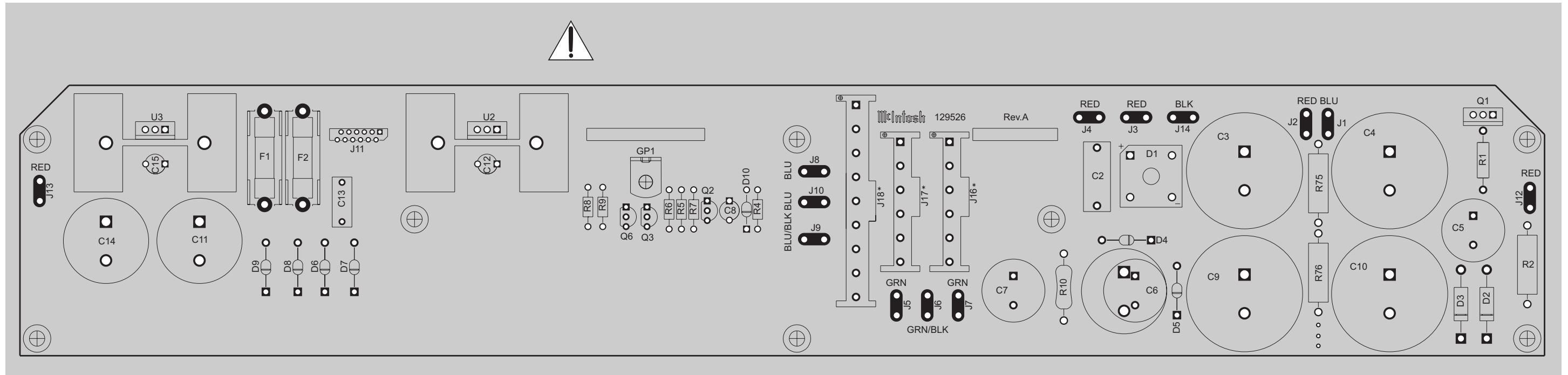
9 POWER SUPPLY 049972



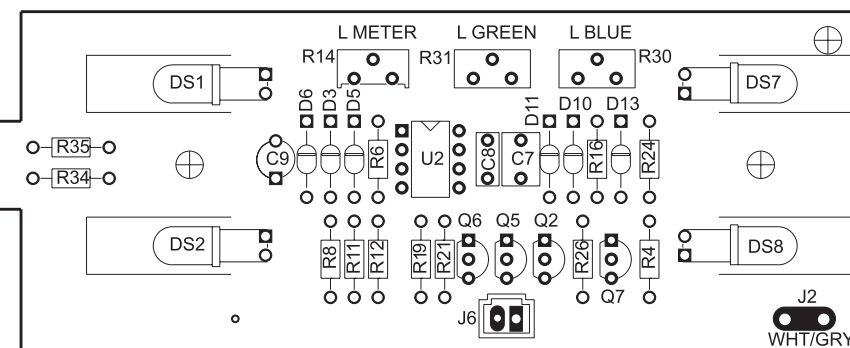
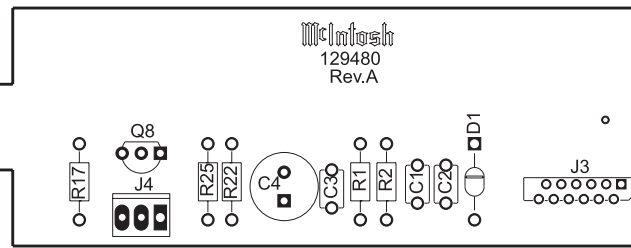
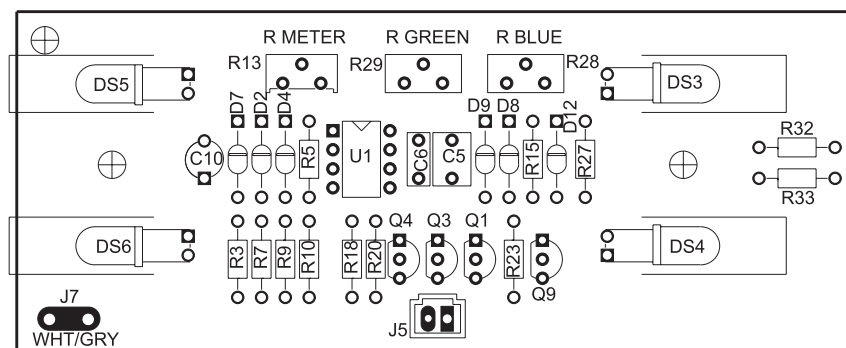
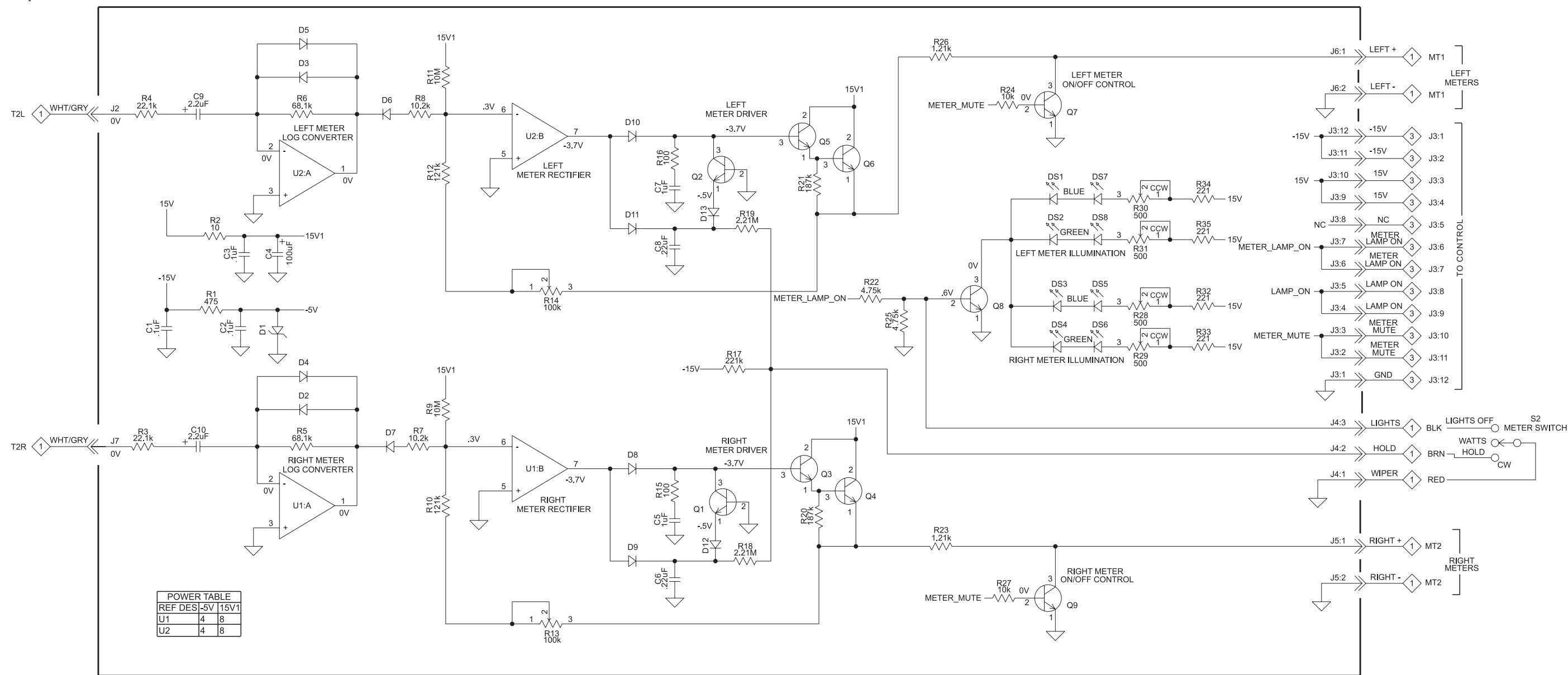
! WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.

9 POWER SUPPLY 049972

 **WARNING** Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.



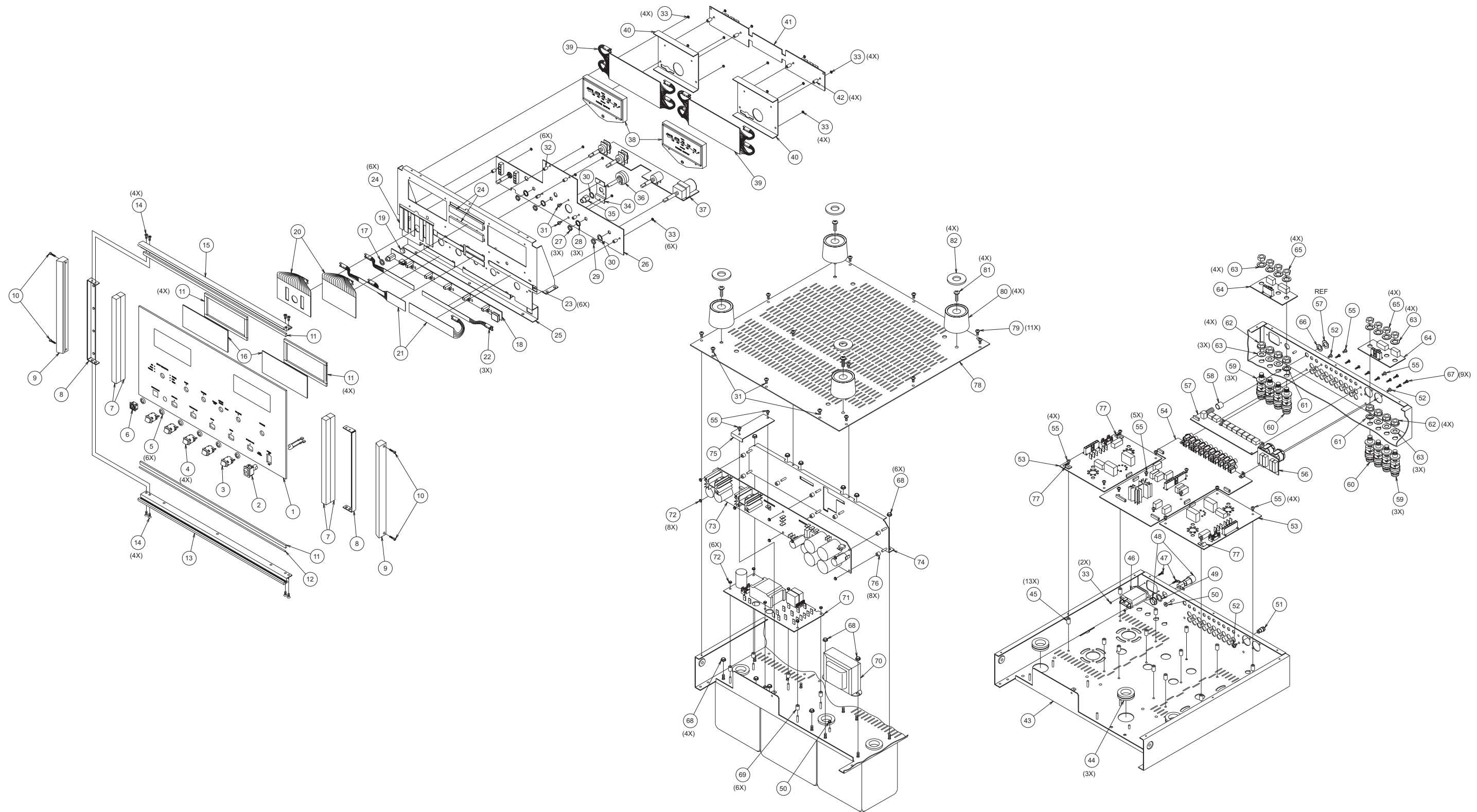
10 METER 049973



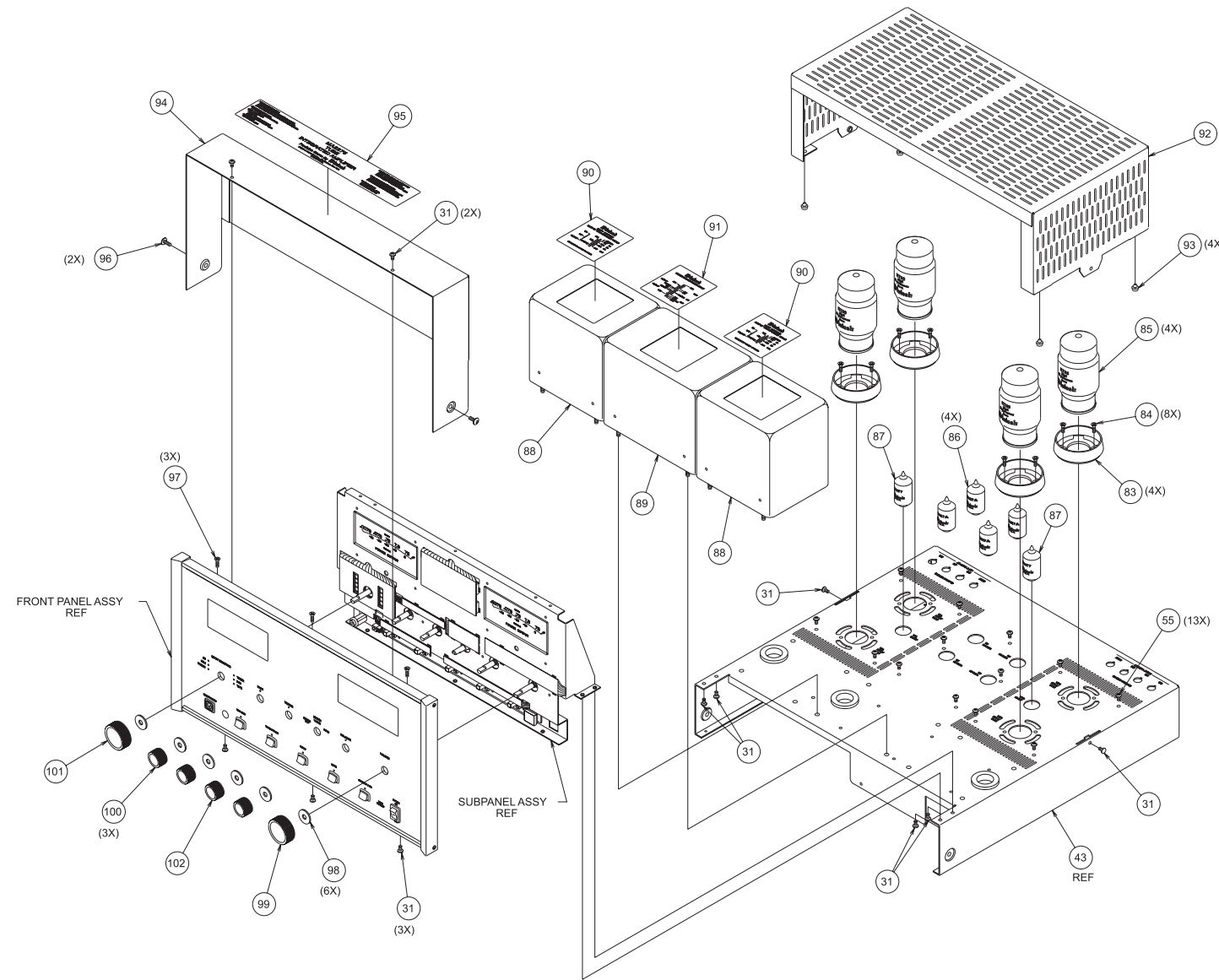
PARTS LIST con't

DS4	LED GREEN 5MM HI-INTENSITY	058165	K4	RELAY REED FORM 1A 5V 500 OHMS	087050	U7	IC DC MOTOR DRIVER	133191	MT1	SENSOR IR 38KHZ	121046
DS5	LED GREEN 5MM HI-INTENSITY	058165	R1	RES NETWORK 2X220K ISO	144262				R1	RES MF 324 OHM 1% 1/4W	144338
DS6	LED GREEN 5MM HI-INTENSITY	058165	R2	RES NETWORK 2X220K ISO	144262	◇6	049969 DATA PCB		R2	RES MF 100 OHM 1% 1/4W	144196
DS7	LED GREEN 5MM HI-INTENSITY	058165	R3	RES NETWORK 2X220K ISO	144262	C1	CAP MONO .1uF 50V 20% Z5U	061305	R14	RES MF 499 1% 1/4W	144087
DS9	LED SQUARE RED	058109	R4	RES NETWORK 2X220K ISO	144262	C2	CAP MONO 1000PF 50V 10% NPO	061303	S1	SWITCH PB TACT	150058
DS10	LED SQUARE RED	058109				C3	CAP MONO .1uF 50V 20% Z5U	061305	S2	SWITCH PB TACT	150058
DS11	LED SQUARE RED	058109	◇5	049968 VOLUME/TONE PCB		C4	CAP MONO .1uF 50V 20% Z5U	061305	S3	SWITCH PB TACT	150058
DS12	LED SQUARE RED	058109	C1	CAP ELECT 10UF 50V	066445	C5	CAP MONO 220PF 100V 10% NPO	061301	S4	SWITCH PB TACT	150058
DS13	LED SQUARE RED	058109	C2	CAP ELECT 47UF 35V	066446	D1	DIODE SILICON	070047	S5	SWITCH PB TACT	150058
DS14	LED SQUARE RED	058109	C3	CAP MONO 100PF 100V 10% NPO	061300	D2	DIODE SILICON	070047			
DS15	LED GREEN 5MM HI-INTENSITY	058165	C4	CAP MONO 100PF 100V 10% NPO	061300	D3	DIODE SILICON	070047	◇8	049971 AMPLIFIER PCB	
J1	CONN FFC 18PIN	117765	C5	CAP MONO .1uF 50V 20% Z5U	061305	J1	JACK HEADPHONE STEREO 1/8IN	117759	C1	CAP MONO 220PF 100V 10% NPO	061301
J2	CONN FFC 18PIN	117765	C6	CAP MONO .1uF 50V 20% Z5U	061305	J2	JACK HEADPHONE STEREO 1/8IN	117759	C2	CAP ELECT 470UF 16V	066508
J3	CONN 12 PIN FFC	117720	C7	CAP ELECT 10UF 50V	066445	J3	JACK HEADPHONE STEREO 1/8IN	117759	C3	CAP MONO .1uF 50V 20% Z5U	061305
Q1	TRANSISTOR NPN SILICON	132171	C8	CAP ELECT 47UF 35V	066446	J4	JACK HEADPHONE STEREO 1/8IN	117759	C4	CAP MONO .1uF 50V 20% Z5U	061305
Q2	TRANSISTOR NPN	132223	C9	CAP MONO 100PF 100V 10% NPO	061300	J5	JACK HEADPHONE STEREO 1/8IN	117759	C5	CAP POLYPROP 0.22UF 20% 1KVDC	064432
R1	RES MF 10K 1% 1/4W	144053	C10	CAP MONO 100PF 100V 10% NPO	061300	J6	JACK HEADPHONE STEREO 1/8IN	117759	C6	CAP POLYPROP 0.22UF 20% 1KVDC	064432
R2	RES MF 10 OHM 1% 1/4W	144157	C11	CAP ELECT 220UF 50V 20%	066254	J7	JACK HEADPHONE STEREO 1/8IN	117759	C7	CAP MONO 100PF 100V 10% NPO	061300
R3	RES NET 10K X8 RES B	144253	C12	CAP ELECT 47UF 10V BP	066378	J8	CONN 12 PIN FFC	117720	C8	CAP MONO 100PF 100V 10% NPO	061300
R4	RES NETWORK 9X-1-223	144238	C13	CAP ELECT 22UF 100V	066506	J9	CONN GOLD F RIGHT ANGLE	117661	C10	CAP ELECT 470UF 16V	066508
R5	RES MF 301 OHM 1% 1/4W	144484	C14	CAP MPF 0.033UF 5% 63VDC	064318	J10	JACK HEADPHONE STEREO 1/8IN	117759	C11	CAP ELECT 10UF 50V	066445
R6	RES MF 301 OHM 1% 1/4W	144484	C15	CAP MONO .1uF 50V 20% Z5U	061305	J11	JACK HEADPHONE STEREO 1/8IN	117759	F1	FUSE T 0.4A 250V	089108
R7	RES MF 806 OHM 1% 1/4W	144089	C16	CAP MONO .1uF 50V 20% Z5U	061305	R1	RES MF 100 OHM 1% 1/4W	144196	J1	CONN 12 PIN FFC	117720
R8	RES MF 10K 1% 1/4W	144053	C17	CAP MPF 0.033UF 5% 63VDC	064318	R2	RES MF 100 OHM 1% 1/4W	144196	J2	BLADE FASTON W/FEET	117708
R9	RES MF 324 OHM 1% 1/4W	144338	C18	CAP ELECT 22UF 100V	066506	R3	RES MF 1K 1% 1/4W	144090	J3	BLADE FASTON W/FEET	117708
R10	RES MF 2.21K 1% 1/4W	144298	C19	CAP MPF 0.033UF 5% 63VDC	064318	R4	RES MF 100 OHM 1% 1/4W	144196	J4	BLADE FASTON W/FEET	117708
R11	RES MF 324 OHM 1% 1/4W	144338	C20	CAP MPF 0.033UF 5% 63VDC	064318	R5	RES MF 1K 1% 1/4W	144090	J5	BLADE FASTON W/FEET	117708
R12	RES MF 324 OHM 1% 1/4W	144338	C42	CAP ELECT 220UF 25V	066507	R6	RES MF 1K 1% 1/4W	144090	J6	BLADE FASTON W/FEET	117708
R13	RES MF 324 OHM 1% 1/4W	144338	D1	DIODE SILICON	070047	R7	RES MF 100 OHM 1% 1/4W	144196	J7	CONN PCB MOUNT POWER RED	117719
R15	RES NETWORK 9X-1-223	144238	J1	CONN 23 PIN FFC	117715	R8	RES MF 100 OHM 1% 1/4W	144196	J9	BLADE FASTON W/FEET	117708
R16	RES MF 1K 1% 1/4W	144090	K1	RELAY REED FORM 1A 5V 500 OHMS	087050	R9	RES MF 100 OHM 1% 1/4W	144196	L1	CHOKE 2.2mH	122001
R17	RES MF 6.49K 1% 1/4W	144140	K2	RELAY REED FORM 1A 5V 500 OHMS	087050	R10	RES MF 100 OHM 1% 1/4W	144196	L2	CHOKE 2.2mH	122001
R18	RES MF 240 OHM 1% 1/4W	144338	K3	RELAY REED FORM 1A 5V 500 OHMS	087050	R11	RES MF 1K 1% 1/4W	144090	Q2	TRANSISTOR N JFET	132222
R19	RES MF 240 OHM 1% 1/4W	144338	K4	RELAY REED FORM 1A 5V 500 OHMS	087050	R12	RES MF 10 OHM 1% 1/4W	144157	Q3	TRANSISTOR NPN	132136
R20	RES MF 240 OHM 1% 1/4W	144338	R1	POT 50KAX2	134490	R13	RES MF 221 OHM 1% 1/4W	144172	Q4	TRANSISTOR NPN	132136
R21	RES MF 240 OHM 1% 1/4W	144338	R2	RES MF 1K 1% 1/4W	144090	R14	RES MF 61.9K OHM 1/4W	144335	Q5	TRANSISTOR NPN	132136
R22	RES MF 100K 1% 1/4W	144113	R3	RES MF 3.32K 1% 1/4W	144095	R15	RES MF 10 OHM 1% 1/4W	144157	Q6	TRANSISTOR NPN	132136
R23	RES MF 240 OHM 1% 1/4W	144338	R4	POT BALANCE 2KOHM	134464	R16	RES MF 22.1K 1% 1/4W	144187	Q7	TRANSISTOR N JFET	132222
R24	RES MF 240 OHM 1% 1/4W	144338	R5	RES MF 475K 1% 1/4W	144364	R17	RES MF 182 OHM 1/4W 1%	144273	Q8	TRANSISTOR N JFET	132222
S1	PC BD SWITCH	129294	R6	RES MF 1K 1% 1/4W	144090	R18	RES MF 182 OHM 1/4W 1%	144273	Q9	TRANSISTOR N JFET	132222
U1	IC SUPERVISOR WITH EEPROM	133468	R7	RES MF 475K 1% 1/4W	144364	R19	RES MF 2.21K 1% 1/4W	144298	R5	RES MF 2.21M 1/4W	144265
U2	IC PROGRAMMED MC2275 V1.00	133523	R8	RES MF 3.32K 1% 1/4W	144095	R20	RES MF 182 OHM 1/4W 1%	144273	R6	RES MF 10K 1% 1/4W	144053
U3	IC SHFT REG SER-PAR	133186	R9	RES MF 10 OHM 1% 1/4W	144157	R21	RES MF 182 OHM 1/4W 1%	144273	R7	RES MF 1.82K 1% 1/4W	144296
U4	IC SHFT REG SER-PAR	133186	R10	RES MF 10 OHM 1% 1/4W	144157	R22	RES MF 2.21K 1% 1/4W	144298	R8	RES MF 40.2K 1% 1/4W	144107
U5	IC AND 2 INPUT X 4	133175	R11	RES MF 10 OHM 1% 1/4W	144157	R23	RES MF 2.21K 1% 1/4W	144298	R9	RES MF 10K 1% 1/4W	144053
Y1	RESONATOR CERAMIC 6.0MHZ W/CAP	180039	R12	RES MF 10 OHM 1% 1/4W	144157	SP1	BRACKET PCB CARD MOUNTING	003611	R10	RES MF 2.21M 1/4W	144265
			R13	RES MF 681 OHM 1% 1/4W	144195	SP2	BRACKET PCB CARD MOUNTING	003611	R11	RES MF 2.74K 1% 1/4W	144304
			R14	RES MF 1M 1/4W	144269	U1	IC SHFT REG SER-PAR	133186	R12	RES MO 46.4k 1% 1W	144436
			R15	RES MF 100K 1% 1/4W	144113	U2	IC 8 LN DRIVER ARRAY	133180	R13	RES MO 46.4k 1% 1W	144436
			R16	RES MF 475 OHM 1% 1/4W	144086	U3	IC OPERATIONAL AMPLIFIER	133189	R14	RES MF 10K 1% 1/4W	144053
			R17	POTENTIOMETER	134457	U4	IC AND 2 INPUT X 4	133175	R15	RES MF 121K 1% 1/4W	144418
			R18	POTENTIOMETER	134457				R16	RES MF 47.5K 1% 1/4W	144108
			R19	RES MF 1M 1/4W	144269	◇7	049970 PUSHBUTTON PCB		R17	RES MF 1K 1% 1/4W	144090
			R20	RES MF 681 OHM 1% 1/4W	144195	C1	CAP MONO .1uF 50V 20% Z5U	061305	R19	RES MF 1M 1/4W	144269
			R21	RES MF 1M 1/4W	144269	C2	CAP ELECT 47UF 16V 6.3X5 CASE	066380	R20	RES MF 1M 1/4W	144269
			R22	RES MF 100K 1% 1/4W	144113	DS1	LED SQUARE RED	058109	R21	RES MF 332k 1% .5W	144355
			R23	RES MF 475 OHM 1% 1/4W	144086	DS2	LED SQUARE RED	058109	R22	RES MO 100K 5% 2W	144438
			R24	RES MF 1M 1/4W	144269	DS3	LED SQUARE RED	058109	R23	RES MO 100K 5% 2W	144438
			R25	RES MF 1K 1% 1/4W	144090	DS4	LED SQUARE RED	058109	R24	RES MO 100K 5% 2W	144438
			R26	RES MF 1K 1% 1/4W	144090	DS5	LED SQUARE RED	058109	R25	RES MO 100K 5% 2W	144438
			R53	RES MF 10 OHM 1% 1/4W	144157	DS8	LED ARRAY(4) YELLOW SQUARE	058126	R27	RES WW 220 OHM 10% 5W	139009
			U1	IC DUAL OPERATIONAL AMPLIFIER	133260	J1	CONN FFC 18PIN	117765	R28	RES WW 220 OHM 10% 5W	139009
			U2	IC OPAMP NE4558N	133028	J2	JACK PHONO 1/8 STEREO VER	117462	R30	RES MF 17.4K 1% 1/4W	144413

EXPLODED VIEW and PARTS LIST



EXPLODED VIEW con't and PARTS LIST



Ref No.	Part No.	Description
1	016495	GLASS
2	171026	CABLE ASSY POWER SWITCH
3	017531	PUSHBUTTON ASSY RED
4	017517	PUSHBUTTON ASSY BLK
5	078033	O-RING
6	017854	BEZEL HEADPHONE
7	094360	TAPE FOAM 1/2 X 1/2
8	004939	BRACKET EXTRUSION
9	018515	END CAP 9"
10	101042	SCREW TS 4-40 X 1/2 SLOT FILL
11	094016	TAPE FOAM 1/4 X 1/8
12	098113	CORD DIAL .027 BLK BRAID SILK
13	018706	EXTRUSION BOTTOM
14	100149	SCREW MACH 6-32 X 1/4 FL U/H ST
15	018738	EXTRUSION TOP
16	092443	FILTER METER
17	078037	O-RING
18	049970	ASSY PUSHBUTTON PCB
19	017191	BUMPER BUTTON
20	017921	LOGO/SELECTOR BACKLIGHT
21	017901	LOGO/ PUSHBUTTON BACKLIGHT
22	017907	TITLE/PUSHBUTTON BACKLIGHT
23	094431	TAPE FOAM WHT 3/8W X 1/32 THK
24	094430	TAPE FOAM WHT 1/2 W X 1/8 THK
25	005347	SUBPANEL
26	049966	ASSY CONTROL PCB
27	110004	NUT CONTROL M7 X 0.75 HEX
28	104013	WASHER LOCK 5/16 X .435 X .002
29	110002	NUT CONTROL M9 X 0.75 PLATED
30	104014	WASHER INT STAR 3/8 X .507 X .002
31	101054	SCREW TAPTITE 6-32 X 1/4 PH PN BLK
32	112060	SPACER 4 X 5/16 STEEL
33	102001	NUT KEP 4-40 CADMIUM PLATE
34	005390	SWITCH PLATE
35	021159	BUSHING SWITCH
36	146243	SWITCH POWER
37	049968	ASSY VOLUME/TONE PCB
38	124087	METER MA2275
39	017922	METER BACKLIGHT
40	005391	METER PLATE
41	049973	ASSY METER PCB
42	112038	SPACER STEEL 4 X 3/8 NICKEL PLATE
43	005346	CHASSIS
44	078031	GROMMET RUBBER 1" ID
45	017895	SPACER NYLON 6-32 X 7/16
46	117755	RECEPTACLE INPUT & LINE FILTER
47	100178	SCREW MACH 4-40 X 3/8 PH PN
48	178161	HOLDER FUSE 5 X 20mm IEC
49	104016	WASHER INT STAR .5 X .630 X .022
50	102003	NUT MACH 6-32 W/LOCK
51	084112	POST GROUND GOLD
52	100250	SCREW MACH SEMS 6-32 X 1/4 PH PN
53	049971	ASSY AMP PCB
54	049954	ASSY MAIN PCB
55	100157	SCREW MACH 6-32 X 1/4 PH PN
56	049967	ASSY BALANCED PCB
57	049969	ASSY DATA PCB
58	017673	SPACER .380 ID X 3/8 L PHENOLIC
59	117740	POST BINDING RED
60	117741	POST BINDING BLK
61	104178	WASHER LOCK M10 EXT STAINLESS
62	102052	NUT GOLD SUPPLIED W/117758
63	104162	WASHER LOCK INTERNAL TOOTH
64	050052	ASSY TERMINAL PCB
65	102051	NUT HEX M9 X 0.75 GOLD PLATED
66	104014	WASHER INT STAR 3/8 X .507 X .002
67	101197	SCREW HI/LO 4-24 X 3/8 PH RD BLK
68	102006	NUT MACH 10-32 W/LOCK
69	021092	SPACER 6 X 5/16
70	122379	CHOKE FILTER
71	050007	ASSY BACKUP POWER SUPPLY PCB
72	102045	NUT KEP 6-32 SPECIAL
73	049972	ASSY POWER SUPPLY PCB
74	005348	SUPPORT BRACKET
75	005395	POWER SUPPLY SHIELD
76	021030	SPACER 6 X 1/4
77	017160	TAB MOUNTING .140 DIA MTG
78	005350	BOTTOM COVER
79	101078	SCREW TAP 8-32 X 5/16 PH PN BLK
80	017841	FOOT
81	100159	SCREW MACH 10-32 X 3/4 PH PN BLK
82	024010	FOOT PAD
83	017761	AIR PIPE
84	100292	SCREW MACH 6-32 X 3/8 PH FH BLK
85	165069	TUBE KT88 MCINTOSH
86	165065	TUBE 12AX7A MCINTOSH
87	165067	TUBE 12AT7
88	050042	POTTED TRANSFORMER OUTPUT
89	050041	POTTED TRANSFORMER POWER
90	126986	DECAL OUTPUT TRANSFORMER
91	126985	DECAL POWER TRANSFORMER
92	005349	TUBE COVER
93	017862	FOOT PUSH-ON
94	005389	DUST COVER
95	126987	DECAL TOP COVER
96	100287	SCREW MACH 8-32 X 3/8 PH TR HD
97	101232	SCREW 6-32 X 1/4 PHIL FLAT
98	104017	WASHER FELT BLK 3/4 X 1/4 X 1/16
99	049695	ASSY KNOB 34 INDEX METRIC
100	049694	ASSY KNOB 21 INDEX METRIC
101	049637	ASSY KNOB 34 METRIC W/O INDEX
102	050055	ASSY KNOB 21 INDEX AMER

REPACKING INSTRUCTIONS

In the event it is necessary to repack the unit for shipment, the unit must be packed exactly as shown below.

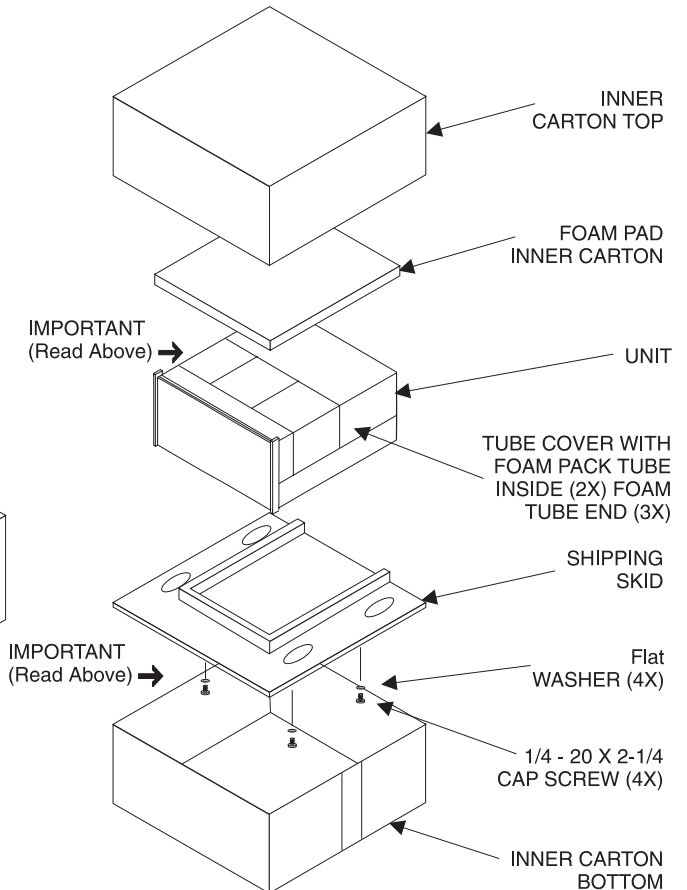
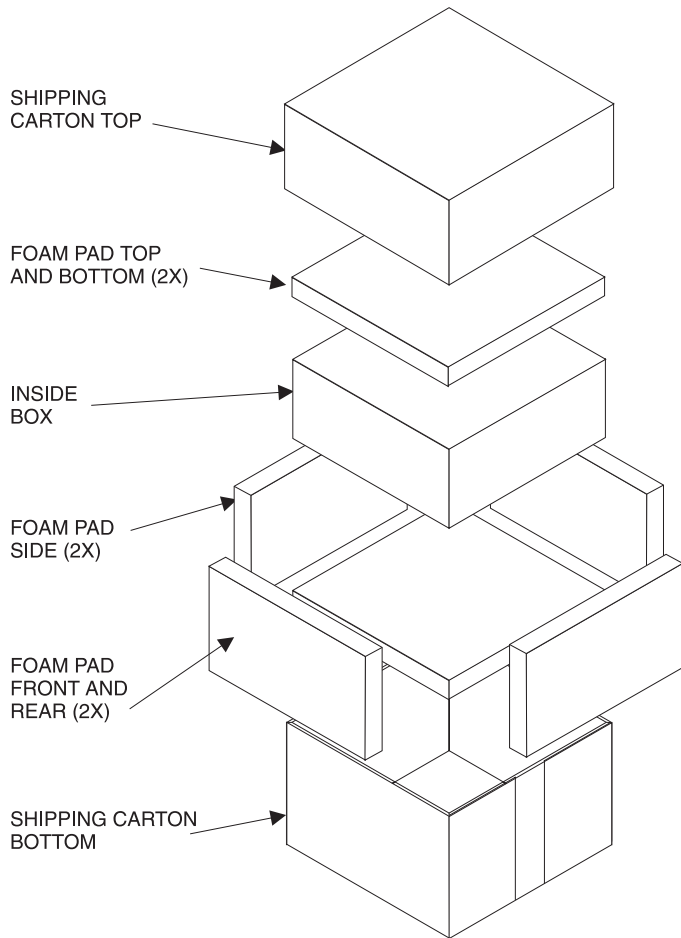
IMPORTANT - For ease of shipment, attach the four feet to the bottom of the unit. Four, 1/4 - 20 x 2-1/4 bolts with washers must be used to fasten the unit securely to the wood skid. Failure to do this will result in shipping damage.

IMPORTANT - Remove Vacuum Tubes from unit and repack in original Tube Pack and place inside Tube Cover before shipping.

If a shipping carton or any of the interior parts is needed, please call or write the Customer Service Department of McIntosh Laboratory. Order parts from the accompanying list by part number.

Use the original shipping carton and interior parts only if they are in good serviceable condition.

Qty.	Part No.	Description
1	034051	Shipping carton bottom
2	034186	Foam pad (front and rear)
2	034187	Foam Pad (side)
2	034054	Foam pad (top and bottom)
1	034052	Shipping carton (top)
1	034137	Inner carton (bottom)
1	034161	Shipping skid
1	034188	Foam pad (inner carton)
1	034136	Inner carton (top)
4	101212	1/4 - 20 x 2-1/4 cap screw
4	104058	Flat washer
2	034179	Tube pack
3	034180	Tube pack (end)



MA2275

TUBE INTEGRATED AMPLIFIER

SERVICE MANUAL



The continuous improvement of its products is the policy of McIntosh Laboratory Incorporated, who reserve the right to improve design without notice. Because of the constant upgrading of McIntosh products' circuitry and components, the Company cannot insure, and does not warrant, the accuracy of the within schematic material, which is intended for information only.